

City and County of San Francisco
Department of City Planning

Environmental Impact Report

222 KEARNY STREET

Draft
81.687E

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Publication Date: March 11, 1983

Public Comment Period: March 11, 1983 through
April 25, 1983

Public Hearing Date: April 21, 1983

Written Comments should be sent to the Environmental Review
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DRAFT ENVIRONMENTAL IMPACT REPORT
222 KEARNY STREET
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Errata

Page 1, paragraph 3, lines 10 and 11: 270,065 gross sq. ft. should read 270,910 gross sq. ft.; 280,065 gross sq. ft. should read 280,910 gross sq. ft.

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I. SUMMARY

A. PROJECT DESCRIPTION

Lincoln Property Company proposes to construct a 19-story office building with street-level retail uses in downtown San Francisco. The sponsor's objective is to obtain a return on capital invested in an office building, and to help meet market demand for office space in the downtown area.

The approximately 20,065-sq.-ft. project site, at the northeast corner of the intersection of Sutter and Kearny Sts., consists of Lots 10, 11, and 29 in Assessor's Block 288. The site is occupied by three structures with offices above retail uses: the six-story Central Realty Building at 154 Sutter St., the five-story Adams Building at 200 Kearny St., and the four-story Robins Building at 220 Kearny St.

The project would consist of a base incorporating the restored exteriors of 154 Sutter St. and 200 Kearny St. with new interiors and a tower rising above the base. The tower would be set back about 35 ft. from the Sutter St. facades of 154 Sutter St. and 200 Kearny St.; the seventh floor of the tower would begin at a height of about 100 ft. and project over a portion of the rooftop terraces proposed on the base. The 220 Kearny St. building would be demolished. The 19-story project tower would be about 315 ft. high and include a ground floor, a mezzanine, and 17 floors of office space. There would be two additional mechanical floors. The project would contain about 270,065 gross sq. ft. of office space and 10,000 gross sq. ft. of ground floor retail space, a total of 280,065 gross sq. ft. The office entrance would be at the present location of 220 Kearny St. and retail space and entrances would front Sutter St. and Kearny St. Hardie Place would provide access to two street-level truck bays and 123 basement-level parking spaces.

The fifth floor of the project would include a 4,200-sq.-ft. rooftop terrace along the 200 Kearny St. frontage, and the sixth floor would include a 3,600-sq.-ft. rooftop terrace along the 154 Sutter St. frontage.

B. MAIN ENVIRONMENTAL EFFECTS

LAND USE AND PLANNING

The project site is at the western edge of the Financial District, and about one block east of the primary retail district of San Francisco centered on Union Square. Nearby land use includes recent high-rise office structures and older, smaller-scaled buildings in retail, office, and hotel uses. The project would result in a net increase in office space of about 203,910 gross sq. ft., and a net decrease in retail space of about 8,400 gross sq. ft. on the site.

The 315-ft.-tall project would comply with the 500-I Height and Bulk District limits which apply to the site, and provide office and retail uses permitted in the C-3-0 Downtown Office District. Project dimensions and gross floor area would meet the 14:1 Floor Area Ratio limit and other Planning Code requirements for the site.

ARCHITECTURAL RESOURCES

The project would restore and preserve the street facades of the buildings at 200 Kearny St. and 154 Sutter St. Both structures are on the List of Architecturally and/or Historically Significant Buildings in the Downtown adopted by the City Planning Commission. The List is based on surveys conducted by the Foundation for San Francisco's Architectural Heritage (Heritage), and the Department of City Planning (DCP). The 200 Kearny St. building is rated "A" in the Heritage survey, and "3" in the 1976 DCP Architectural Survey. The 154 Sutter St. building is rated "B" and "2", respectively, and the 220 Kearny St. building "C" and "1", respectively. The 220 Kearny St. building would be demolished; this structure is not on the List of Architecturally and/or Historically Significant Buildings in the Downtown. The mezzanine glazing and corner canopy, which have been altered or removed from the 200 Kearny St. building, would be restored in a manner consistent with the original design. The cornice removed from the 154 Sutter St. building would be restored in a similar manner. New construction would

replace the existing interior of these two structures, and the existing floor and window levels of the 200 Kearny St. and 154 Sutter St. buildings would be maintained. Tower surface materials have not been determined.

The north frontage of Sutter St. from Montgomery to Grant Sts. is considered a cohesive architectural grouping of post-1906 Earthquake commercial structures. (The Hallidie Building, adjacent to the site on the east at 130 Sutter St., is a designated City Landmark and is listed on the National Register of Historic Places.) The project tower would alter the visual setting of these buildings and introduce a high-rise element of modern design along this frontage. The tower would contrast with the existing building heights which range from the five-story 200 Kearny St. building at the west end of the project block to the 12-story California Pacific Building at the east end of the block.

The Landmarks Preservation Advisory Board has recommended to the City Planning Commission the designation of a City historic district, the Hallidie Building Block - Retail Historic District, which would include the 154 Sutter St. and 200 Kearny St. buildings. If the district were approved by the Commission and the Board of Supervisors prior to approval of the project, the project would require a Certificate of Appropriateness from the Commission for alterations to the exteriors of the two project buildings, pursuant to Section 1006 of the City Planning Code.

URBAN DESIGN, WIND AND SHADOW EFFECTS

The proposed office tower would be visible from street-level viewpoints on Sutter and Kearny Sts. Because of the proposed 35-ft. setback, only the upper portion of the tower would be visible from the Sutter St. sidewalk along the project frontage. The tower would be similar in scale to other structures recently built, under construction, or approved in the western portion of the Financial District. It would contrast with smaller-scale, older buildings along Kearny and Sutter Sts. and in the retail area to the west. The project would obstruct views from lower floors of existing nearby high-rise buildings, including the Bank of America Headquarters and the Crocker Bank Northern

California Headquarters. The project tower would also be visible from long-range viewpoints, such as Twin Peaks, as part of a cluster of office towers in the Financial District.

The project would increase wind speed ratios on Sutter and Kearny Sts. near the site. All ratios would remain in the moderate range, or lower. Pedestrian discomfort due to project wind effects would occur a maximum of seven percent of the year, depending upon wind direction.

Project shadows would overlap shadows cast by existing development at most times of the day and seasons of the year. No substantial new shadows would be cast by the project on public open spaces or sidewalks.

EMPLOYMENT, HOUSING AND FISCAL FACTORS

The project would result in a net increase of about 203,910 gross sq. ft. of office space and a net decrease of about 8,400 gross sq. ft. of retail space on the site. About 1,125 permanent office and 25 retail jobs would be provided in the project, a net increase of about 550 office jobs and a net decrease of 48 retail jobs. About 650 other jobs in the Bay Area would result from the employment multiplier effect. The project would require about 260 person-years of construction labor. About 400 additional labor-years of employment would be generated in the Bay Area as a result of the multiplier effect of project construction. Total office employment generated at the site would result in a demand for about 240 new housing units in San Francisco; the net demand, based on present office tenants at the site moving to other San Francisco locations, would be 120 units.

The project would probably have an initial fiscal benefit to the City. Because revenues would probably increase at a slower rate than costs, due to Proposition 13 limitations on property tax increases, cumulative costs of providing services to currently proposed and approved development could eventually overtake the revenues they would generate. This assumes that no new revenue sources are found, costs of city services increase and the rate of new development declines.

TRANSPORTATION

Afternoon (p.m.) peak-hour transit ridership due to the project would increase transit use by one percent or less on non-Muni systems. Trips expected to be generated by cumulative development in the Downtown (projects under construction, approved or under review, including this project) would cause most Muni lines serving the downtown area to operate beyond maximum recommended capacity (defined as 150% of seated capacity) during the p.m. peak hour in 1990. The project would contribute about 110 peak-hour trips to these lines, about a one percent increase over projected 1990 base conditions.

Increased traffic volume on nearby streets due to the project itself would not reduce the Levels of Service of traffic operation on the street system in 1990. Cumulative downtown growth by 1990, including the project, would reduce the Level of Service at the Fourth/Harrison, Mission/Beale, Clay/Front, Mission/Main, Washington/Battery intersections.

The project would have one 35-ft.-long, and one 25-ft.-long, off-street loading space. This would meet City Planning Code requirements for two spaces for office buildings of 500,000 gross sq. ft. or less. It would not meet loading space standards adopted as policy by the City Planning Commission (Resolution No. 9286, January 21, 1982), which would require three 35-ft. loading spaces for the project.

Project parking demand would contribute to the projected deficit in long-term and short-term parking spaces in the Downtown area. The 123 off-street vehicle parking spaces proposed in the project would reduce this deficit, but would be inconsistent with City policies to discourage new parking in the Downtown and provide needed new spaces in peripheral areas.

CONSTRUCTION NOISE

Project construction would increase noise levels in the project vicinity during the approximately two-year construction period. Highest average construction noise levels, about 77 to 82 dBA, experienced in offices, stores

and hotels near the site would interfere with speech. Daytime sleepers in the Stanford Hotel adjacent to the site on the north and in the Sutter Hotel across Sutter St. to the south would be disturbed.

AIR QUALITY

Project-related vehicle traffic would add to regional pollutant emissions. The project would not, however, conflict with the control strategies of the 1982 ABAG Bay Area Air Quality Plan and, alone, would have no measurable impact on citywide or regional pollutant concentrations, or on the frequency of exceedances of standards. Although the project, in conjunction with cumulative development, would add to carbon monoxide (CO) concentrations, the 1987 Attainment Year base concentrations would be expected to be less than in 1982 because increased Federal- and State-mandated emission controls on new vehicles would more than offset the growth in traffic volumes.

ENERGY

Project energy consumption would be about 128,300 British thermal units (Btu) per sq. ft./year, which would meet state energy efficiency standards for office and retail buildings, in conformity with Title 24 of the State Administrative Code. Project electricity consumption would be equivalent to about 1,035 average residential customers in San Francisco; natural gas consumption would be equivalent to about 20 average residential customers.

C. MITIGATION MEASURES

Mitigation measures proposed as part of the project include:

ARCHITECTURAL RESOURCES

- The project would restore and preserve the street facades of the buildings at 200 Kearny St. and 154 Sutter St. Both structures are on the City's List of Architecturally and/or Historically Significant Buildings in the Downtown.

- Restoration and preservation of the exteriors of 200 Kearny St. and 154 Sutter St. would strengthen the visual relationship of these buildings to other buildings of similar age and scale in the cohesive architectural grouping on the north frontage of Sutter St., in the project block.

URBAN DESIGN

- The project tower would be set back about 35 ft. from the Sutter St. facades of 200 Kearny St. and 154 Sutter St., to reduce the visibility of the project tower at pedestrian-level along the north sidewalk of Sutter St.
- The project would include ground floor retail space in the 154 Sutter St. and 200 Kearny St. buildings, which would maintain the pedestrian-oriented uses now on the site, although the project would reduce total retail space at the site.

EMPLOYMENT, HOUSING AND FISCAL FACTORS

- The project sponsor would offer current tenants on-site the right-of-first-refusal for space in the project building, at then-current (1985) market rates.
- The project sponsor would mitigate the net housing demand of 122 units generated by the project, through off-site development, or rehabilitation of vacant units in San Francisco. This could be accomplished either by direct sponsorship of a housing development or by providing financial aid to a housing development, as provided for in the City's Office Housing Production Program.

TRANSPORTATION, CIRCULATION AND PARKING

- Upon project completion the project sponsor would encourage tenant firms to implement a flexible time ("flex-time") system for employee working hours. (Flex-time is designed to reduce peaks of congestion in the transportation system.)

- A transportation broker in the management office of the proposed building would encourage transit use through the on-site sale of BART, Muni, and Golden Gate Transit passes to employees, and by distributing transit information. The broker would encourage employee carpool and vanpool systems, in cooperation with the non-profit RIDES for Bay Area Commuters, by providing a central clearinghouse for carpool information.
- During the approximately two-year construction period, project truck movement would be limited to the hours between 9 a.m. and 4 p.m. to minimize peak-hour traffic conflicts. The project sponsor and construction contractor would meet with the Traffic Engineering Division of the Bureau of Engineering and the Office of Environmental Review to determine feasible traffic mitigation measures to reduce traffic congestion during construction of this and other projects (including, for example, the approved San Francisco Federal Savings building at Post and Kearny Sts., and the 333 Bush St. building).

CONSTRUCTION NOISE

- The general contractor would be required to construct barriers around the site, and around stationary equipment such as compressors, to reduce construction noise by as much as five dBA at the site.
- The general contractor would be required to locate stationary equipment in pit areas or excavated areas to serve as noise barriers to the extent possible.
- Construction activities would be limited to hours between 7 a.m. and 7 p.m. (the San Francisco Noise Ordinance limits noise after 8 p.m.) to reduce disturbance to occupants in residential hotels to the north and the Sutter Hotel south of the site.

ENERGY

- Wherever feasible, office suites would be equipped with individual light switches, time-clocks and fluorescent lights to conserve electric energy. A centralized computer system would monitor evening and weekend heating and air-conditioning use. These measures would allow the project to meet or exceed Title 24 energy conservation requirements.
- The project would comply with the formerly proposed Federal Energy Building Temperature Restrictions, in the operation of heating, ventilating and air-conditioning (HVAC) equipment. The HVAC system would be equipped with an economizer cycle to use outside air for cooling, when feasible.

D. ALTERNATIVES TO THE PROPOSED PROJECT

1. NO-PROJECT

The no-project alternative, would retain the existing structures on the site. Environmental characteristics of this alternative would be the same as with present conditions.

2A. PRESERVATION OF ALL SITE BUILDINGS

Alternative 2A would restore all site buildings to meet current Building Code and seismic safety standards. The alternative would preserve 154 Sutter St. and 200 Kearny St., on the City Planning Commission's list of architecturally significant structures, and 220 Kearny St., considered of contextual importance. Total floor area would be about 94,500 gross sq. ft., compared to 280,000 sq. ft. for the project. Effects of this alternative would be similar to Alternative 1, the No-Project Alternative, except that tenant displacement effects, during renovation, would be similar to those of the project.

2B. PRESERVATION OF 200 KEARNY ST. AND 154 SUTTER ST.; NEW CONSTRUCTION AT 220 KEARNY ST.

Alternative 2B would retain the 200 Kearny St. and 154 Sutter St. buildings as separate structures, with new construction at the site of 220 Kearny St. The new building would be 440 ft. high, with 5,000 sq. ft. of leasable floor area per floor. Overall gross floor area of the tower and retained buildings would be the same as the project, 280,000 gross sq. ft. This alternative would retain the existing architecturally significant buildings on Sutter St. The new office tower would be about 120 ft. taller than the proposed project, would be more visible from long-range viewpoints and would cast longer shadows. Transportation and economic effects would be about 25% less than those of the project, because of less leasable floor area in the tower resulting from space occupied by elevator and service cores.

3. COMBINED OFFICE/RESIDENTIAL BUILDING, INTERIM CONTROLS

Alternative 3 would be a combined office and residential building, developed under Interim Controls including floor area bonuses for residential uses. The design would be similar to the proposed project, with four additional floors providing about 42,000 sq. ft. of residential space. Overall floor area would be about 320,000 gross sq. ft., about 15% greater than the 280,000-gross sq.-ft. proposed project. The greater height of this alternative would increase its visibility, and it would cast larger shadows. Shadows would generally overlap those cast by other buildings. This alternative would partially mitigate the 122-unit net housing demand of the project, by provision of 42 units. Transportation impacts of the office portion of this alternative would be similar to those of the project. The residential portion would generate about 15% additional trips, with a more balanced travel pattern, in terms of direction and time of day. Other effects would be similar to those of the project.

4A. GUIDING DOWNTOWN DEVELOPMENT ALTERNATIVE - PRESERVATION

Alternative 4A would be consistent with controls proposed in the Department of City Planning study document Guiding Downtown Development (GDD), July 1982.

Under GDD, the site would be rezoned into the C-3-R (Downtown Retail) District, with a maximum basic FAR of 6:1 and a height limit of 120 ft. Alternative 4A would restore and preserve 200 Kearny St. and 154 Sutter St., with new construction at 220 Kearny St. The latter would be a nine-story, 120-ft.-high structure. Total area of this alternative would be about 115,000 sq. ft., or about 60% less than the 280,000 gross sq. ft. of the proposed project. Traffic, energy, and air quality effects would be correspondingly reduced. The smaller alternative would be less visible than the project from long-range viewpoints.

Under proposed GDD controls, the alternative would require City Planning Commission conditional use approval for alteration or demolition of buildings on the City's list of significant structures in the downtown. This alternative would restore and preserve buildings on the list (200 Kearny and 154 Sutter) with interior alterations, and would maintain the existing Sutter St. streetscape. GDD would allow a bonus of 50% of the restored buildings floor area to be transferred to another site in the C-3. An additional 40,000 sq. ft. of unbuilt floor area could be transferred in this manner.

4B. GUIDING DOWNTOWN DEVELOPMENT ALTERNATIVE - NEW CONSTRUCTION

Alternative 4B would be demolition of the three site buildings and construction of an office building consistent with controls proposed GDD. The alternative would require City Planning Commission conditional use approval for alteration or demolition of buildings on the City's list of significant structures in the downtown. This alternative would have a gross floor area of about 120,000 gross sq. ft., compared to 280,000 gross sq. ft. for the project, about 60% less than the project, and would be 120 ft. high. The new building would alter the existing Kearny St. and Sutter St. streetscapes. Other effects of the project would be similar to those of Alternative 4A, above.

5. NO ON-SITE PARKING

Alternative 5 would be the same as the proposed project, with no basement-level parking. The alternative would be consistent with

San Francisco Comprehensive Plan policies discouraging new parking facilities in the Downtown core. The alternative would increase the net deficit in Downtown parking by about 120 spaces, compared to about 70 with the project. It would not alter the Levels of Service at the Sutter-Kearny, Sutter-Montgomery, Bush-Montgomery and Bush-Kearny intersections with cumulative plus project traffic. This alternative would reduce pedestrian-vehicle conflicts at Hardie Place and Kearny St., compared to the project.

6. ALTERNATIVE PROJECT DESIGN

Alternative 6 would be the same as the proposed project but with a different tower design. An L-shaped tower would be set back completely from the roof of 200 Kearny St. Above the 154 Sutter St. facade, the tower would be set back in a series of steps. The alternative would maintain the 200 Kearny St. building, at Sutter and Kearny Sts., as it is. The setbacks above 154 Sutter St. are intended to relate to the pattern of building heights on Sutter St. Overall height would be 305 ft., compared to 315 ft. for the project.

As the total floor area of this alternative would be the same as the project, other environmental effects would be similar to those of the project.

II. PROJECT DESCRIPTION

A. SPONSOR'S OBJECTIVES

Lincoln Property Company, of San Francisco, proposes to construct a 19-story office building with street-level retail uses, in downtown San Francisco. The sponsor's objectives are to restore and preserve buildings at 200 Kearny St. and 154 Sutter St. which are on the City's List of Architecturally and/or Historically Significant Buildings in the Downtown and incorporate these into a contemporary project, to obtain a return on capital invested, and to meet market demand for office space in the downtown area. The project architect is Skidmore, Owings and Merrill, of San Francisco.

B. PROJECT LOCATION

The project site, approximately 20,065 sq. ft. at the northeast corner of the intersection of Sutter and Kearny Sts., consists of Lots 10, 11, and 29 in Assessor's Block 288 (see Figures 1 and 2, pp. 14 and 15 and Initial Study, Figure 2, p. 164). The site has frontages of about 170 ft. along Sutter St. and about 120 ft. along Kearny St. About 135 ft. of the northern site boundary fronts on Hardie Place, an alley providing service access to buildings on the site and to buildings east and north of the site.

The site is at the western edge of the Financial District. It is two blocks south of the Bank of America headquarters building, at Kearny and California Sts., and two blocks north of Market St.

C. SITE AND BUILDING PLANS

The project would consist of a base which would include the restored street facade of the Central Realty Building at 154 Sutter St., the Kearny St.



FIGURE 1:
Site Location

SOURCE: Environmental Science Associates, Inc.

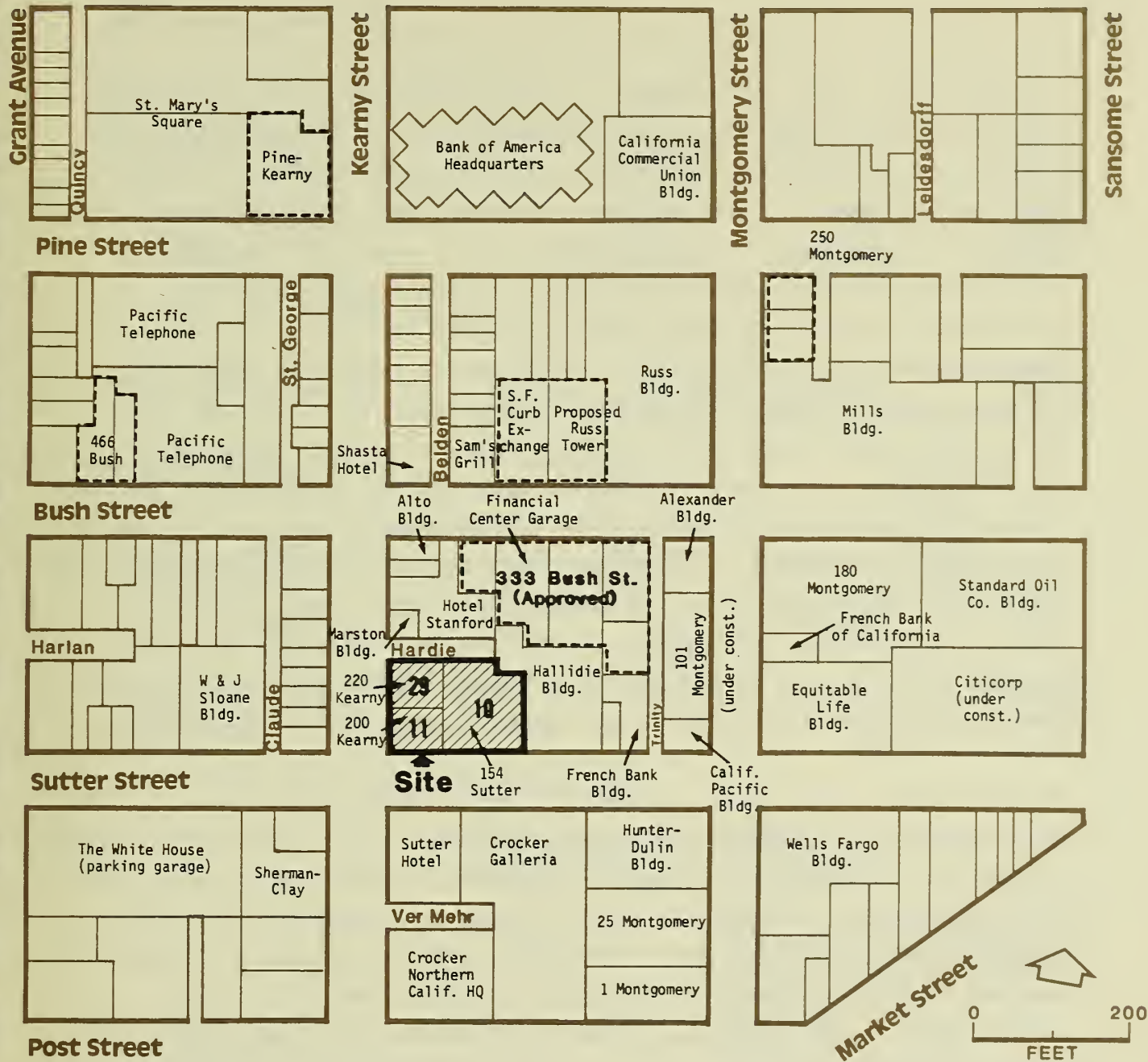


FIGURE 2:
Project Site and Vicinity

SOURCE: Environmental Science Associates, Inc.

II. Project Description

and Sutter St. facades of the Adams Building at 200 Kearny St., and a tower which would be set back 35 ft. from the Sutter St. frontage and would rise behind terraces on the two roof areas of the base (see Figure 3, p. 18). Tower surface materials have not been determined; they would be light-colored metal and non-reflective glass in a curtain wall; light-colored precast concrete panels and non-reflective glass; or stone facade panels and non-reflective glass. The Robins Building at 220 Kearny St. would be demolished and replaced by the part of the project tower that would include the main office entrance. The proposed project would be 19 stories and 315 ft. tall overall, and would include ground floor retail and building service space, a mezzanine with elevator lobby and office space, and 17 office floors. Two mechanical floors would be located between the eighth and ninth floors and in a penthouse. The project would contain 270,910 gross sq. ft. of office space and 10,000 sq. ft. of ground floor retail space, a total of 280,910 gross sq. ft. (see Table 1, Project Characteristics, p. 17). The proposed building would be the maximum allowable FAR for the site, excluding floor area bonuses or transfer of development rights; neither are proposed.

The restoration of the facade of the building at 200 Kearny St. would include replacement of the mezzanine glazing and the corner canopy consistent with the original building design, and removal of window air conditioning units. The building facade at 154 Sutter St. would include a restored cornice. (See Figures 3 and 4, pp. 18 and 19.) New construction is proposed to replace the existing interior of these two structures to permit functional floor configurations. The existing building at 200 Kearny St. is about 70 ft. high and the building at 154 Sutter St. is about 90 ft. high. The seventh floor of the project tower would begin at a height of about 100 ft. above and behind rooftop terraces of the two buildings. The projecting portion of the tower would overhang the 200 Kearny St. rooftop terrace about 25 ft., or about 17% of the area of this terrace, and would overhang about 8% of the 154 Sutter St. rooftop terrace.

At ground level, the building's office entrance would be on Kearny St. Retail entrances would be on Sutter St. and Kearny St. The ramp to basement parking and the entry to the loading dock area would be provided at ground level from Hardie Place (see Figures 5 and 6, pp. 20 and 21).

TABLE 1: PROJECT CHARACTERISTICS

GROSS SQUARE FEET (gross sq. ft.):	<u>Office*</u>	<u>Retail*</u>	<u>Total*</u>
Existing Buildings	67,000	18,400	94,500
Proposed Project	<u>270,910</u>	<u>10,000</u>	<u>280,910</u>
Net Change	203,910	- 8,400	186,410

FLOOR AREA CALCULATIONS (sq. ft.):

Site Area:	20,065	GSF Proposed:	280,910 **
GSF allowable at 14:1 FAR:	280,910	Open Space Proposed:	9,800
		Open Space/Office Space Ratio:	1:27

PROJECT DIMENSIONS:	<u>Proposed</u>	<u>Permitted</u>
Height	315 ft.	500 ft.
Maximum Length***	138 ft.	170 ft.
Maximum Diagonal***	188 ft.	200 ft.

ON-SITE EMPLOYMENT	<u>Office</u>	<u>Retail</u>	<u>Total</u>
Existing Buildings	533	73	606
Proposed Project	<u>1,084</u>	<u>25</u>	<u>1,149</u>
Net Change	551	-48	543

ARCHITECTURAL SURVEYS OF EXISTING BUILDINGS:

	<u>DCP Rating</u>	<u>Heritage Rating</u>	<u>Proposed Disposition</u>
200 Kearny (Adams)	3	A	Restore and preserve Sutter and Kearny St. facades and meet building and planning codes for project use; new interior
220 Kearny (Robins)	1	C	Demolish
154 Sutter (Central Realty)	2	B	Restore and preserve Sutter St. facade and meet to building and planning codes for project use; new interior

* Does not include areas excluded from FAR calculations such as mechanical areas and building storage, parking, and loading. Existing retail space excludes 9,100 sq. ft. of retail support space such as tailor work rooms.

** No bonuses or transfers of development rights are proposed.

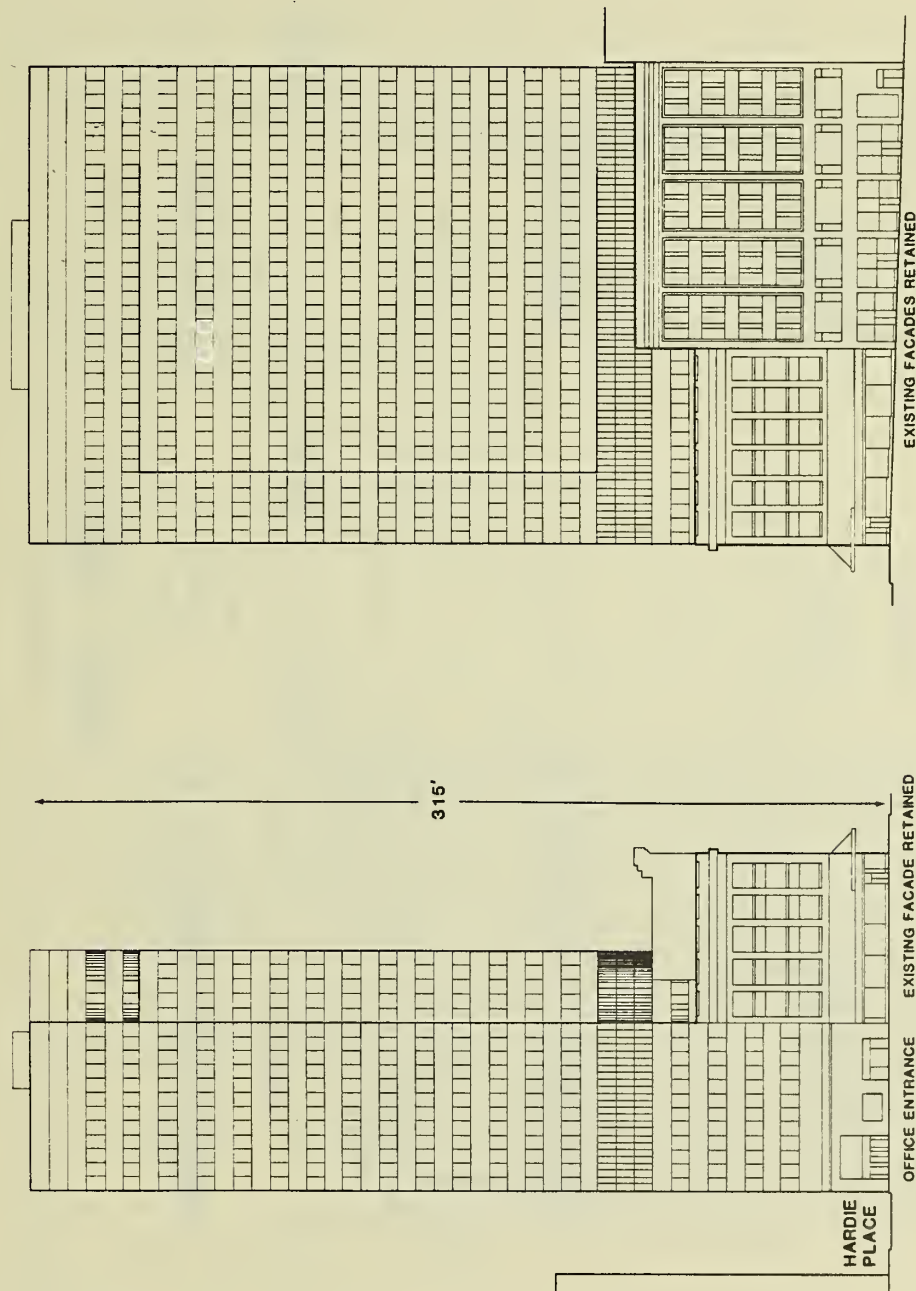
***Above 150 ft.

SOURCE: Environmental Science Associates, Inc.; Skidmore, Owings and Merrill



SOURCE: Skidmore, Owings, & Merrill

FIGURE 3: View of Project Model Looking Northeast from Sutter and Kearny Streets



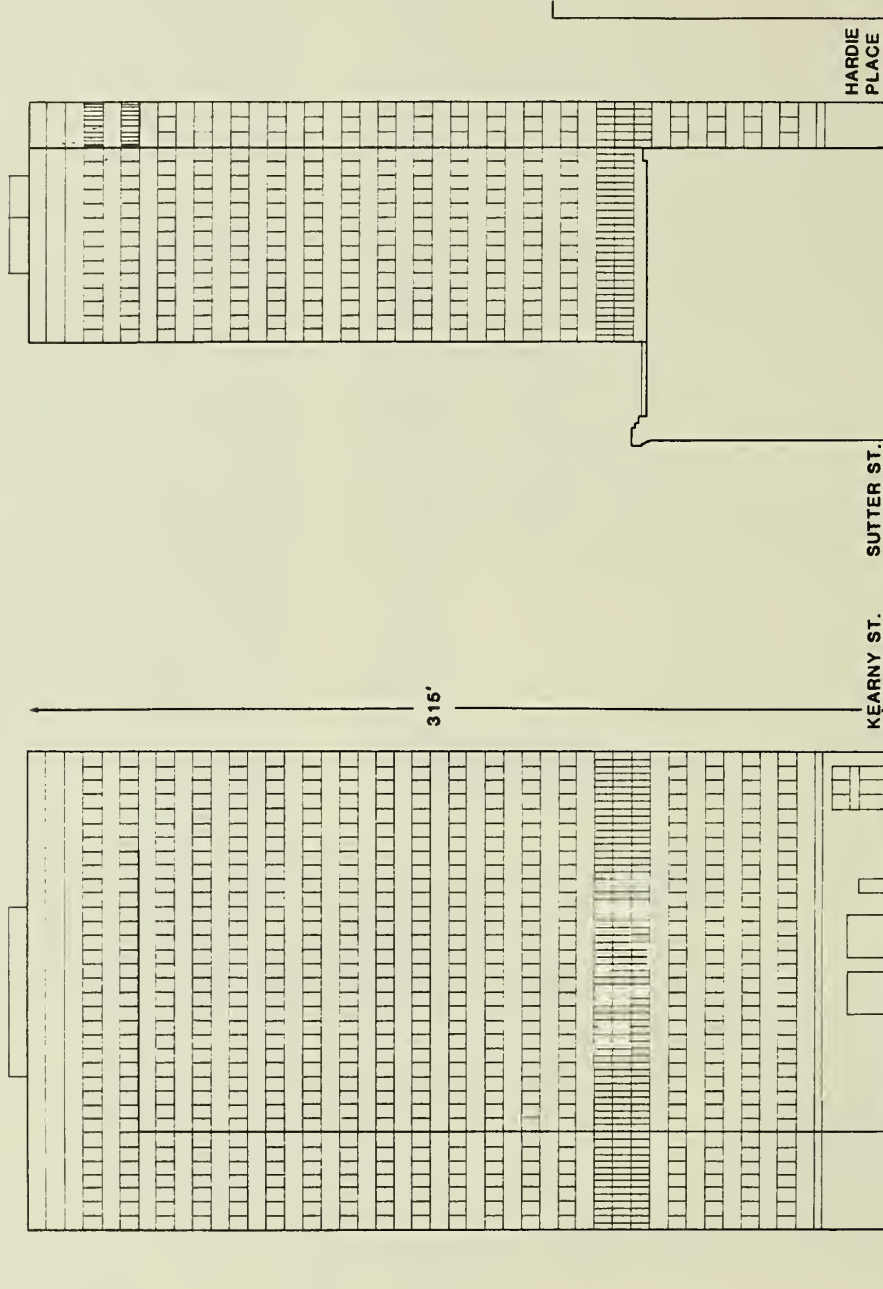
SOUTH ELEVATION (SUTTER STREET)

WEST ELEVATION (KEARNY STREET)



FIGURE 4: Kearny Street and Sutter Street Elevations

SOURCE: Skidmore, Owings & Merrill



EAST ELEVATION

NORTH ELEVATION (HARDIE PLACE)

FIGURE 5: North and East Elevations

SOURCE: Skidmore, Owings & Merrill

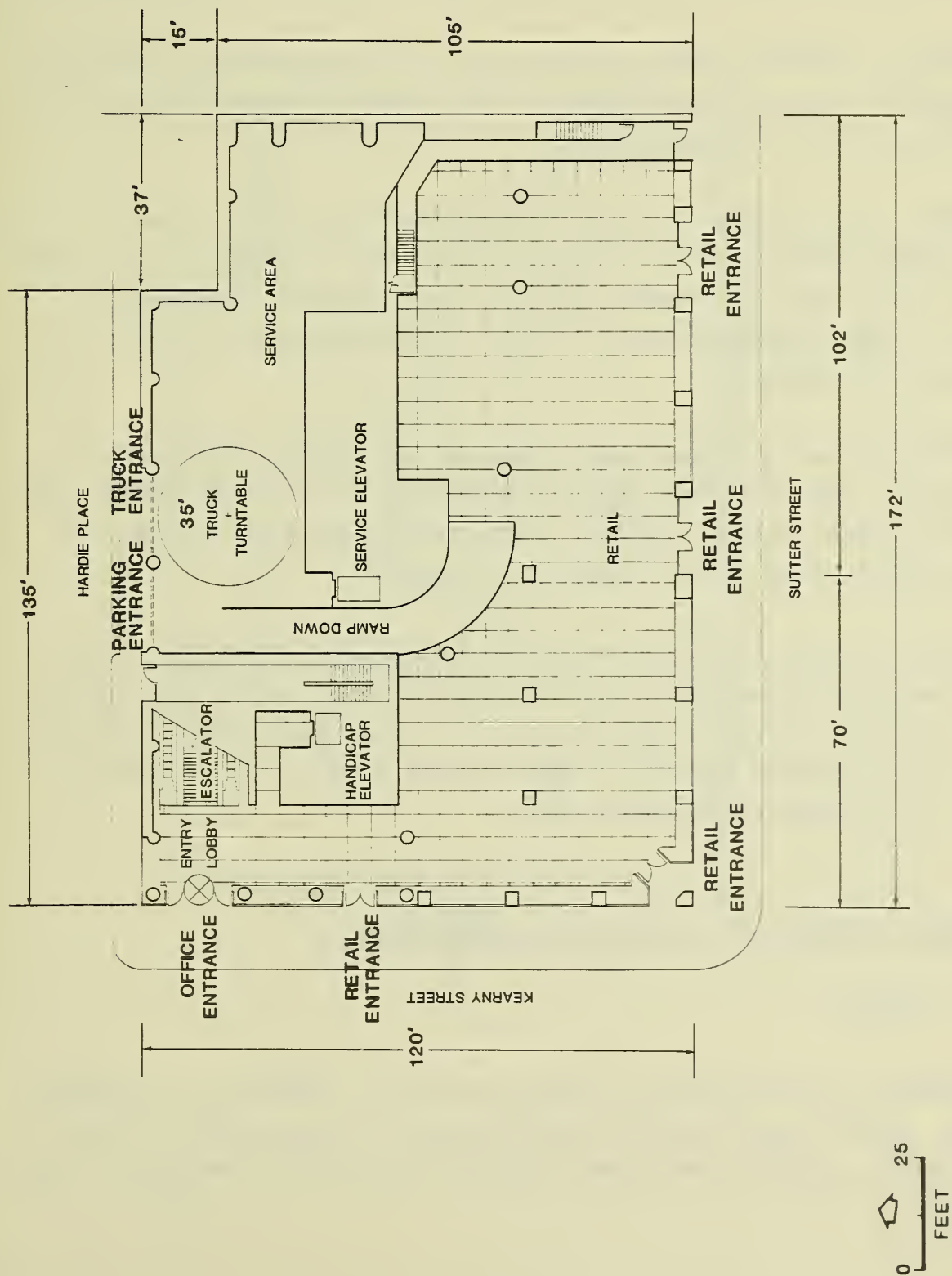


FIGURE 6: Ground Floor Plan

SOURCE: Skidmore, Owings & Merrill

The loading area would include one 35-ft.-long truck bay, one 25-ft.-long truck bay, and a 35-ft.-diameter truck turntable so trucks using the loading dock would not have to back up on Hardie Place. There would be two basement levels containing 123 parking spaces (see Figure 7, p. 23). Parking would total 7% of gross floor area (as permitted by Planning Code Section 204.5(c)).

The Kearny St. entrance would provide access to the mezzanine via escalators. The mezzanine level would include the building lobby and about 6,500 sq. ft. of office space (see Figure 8, p. 24).

The second, third and fourth floors of the project would each include approximately 17,600 sq. ft. of office space. In the southwest corner of the project, floors would be stepped down with a set of stairs (see Figure 9, p. 25) in order to maintain the existing floor and window levels of the building at 200 Kearny St.

The fifth floor would include about 13,400 sq. ft. of office space and a 4,200-sq.-ft. rooftop terrace above the 200 Kearny St. renovated facade. The sixth floor would include 9,800 sq. ft. of office space and a 3,600-sq.-ft. rooftop terrace along the 154 Sutter St. frontage.

The seventh through 17th floors would each include about 11,400 sq. ft. of office space (see Figure 10, p. 26). These floors would extend about 25 ft. over the rooftop terrace of 200 Kearny St., covering approximately 17% of this terrace. The 18th and 19th floors would include 10,000 sq. ft. of office space, with a mechanical penthouse above.

D. PROJECT SCHEDULE, COSTS AND APPROVAL REQUIREMENTS

PROJECT SCHEDULE

Environmental review and detailed project design are scheduled for completion in 1983. Partial demolition and site preparation are anticipated to require three months; excavation one month; foundation preparation three months; steel

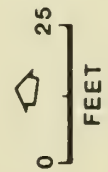
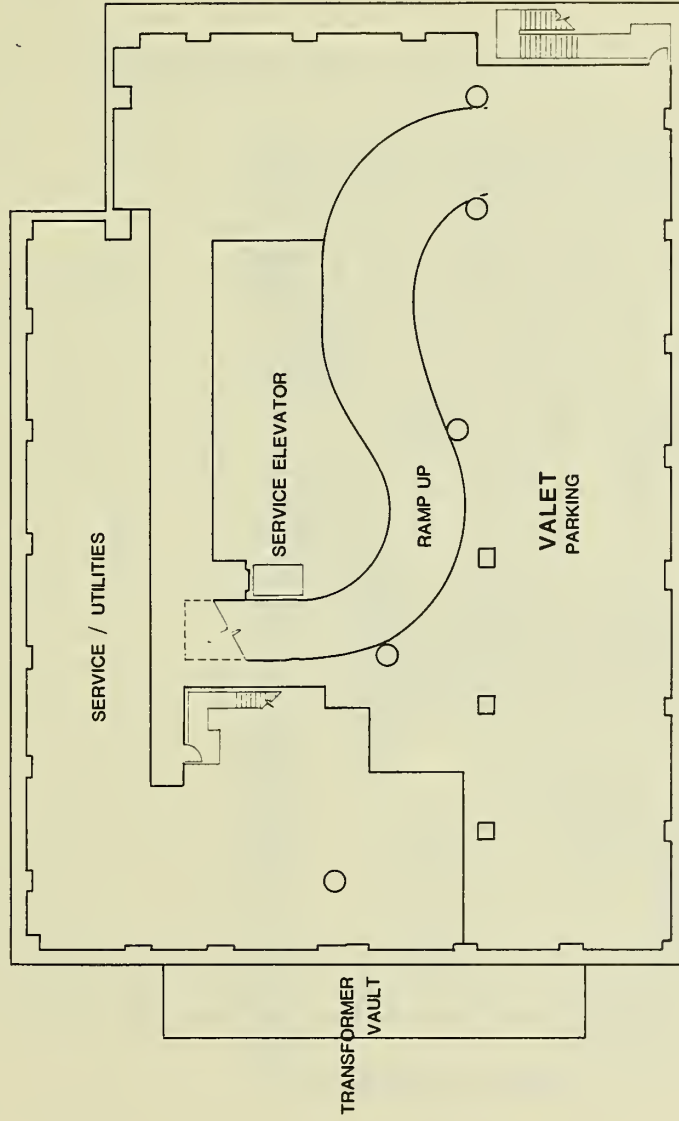
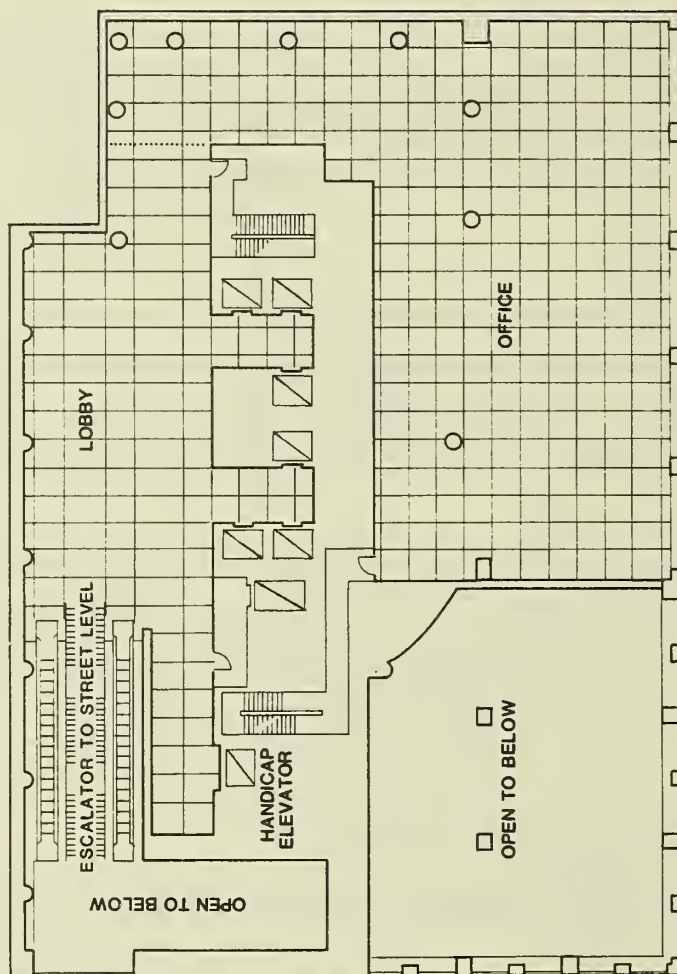


FIGURE 7: First Basement Floor Plan

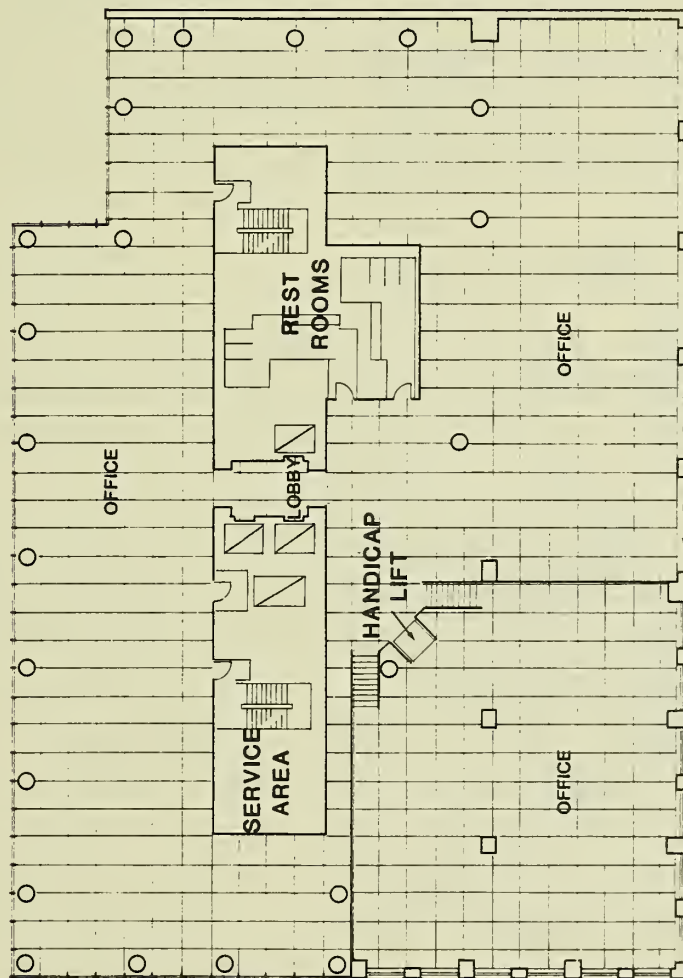
SOURCE: Skidmore, Owings & Merrill



 ELEVATOR

FIGURE 8: Mezzanine Floor Plan

SOURCE: Skidmore, Owings & Merrill

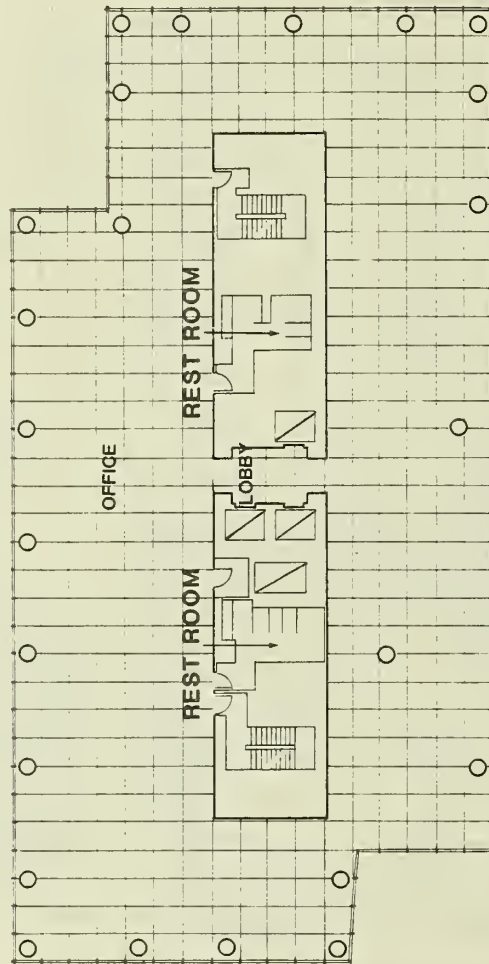


0 25
FEET

ELEVATOR

FIGURE 9: Second through Fourth Floor Plan

SOURCE: Skidmore, Owings & Merrill




 ELEVATOR

FIGURE 10: Typical Floor Plan (7-17)

SOURCE: Skidmore, Owings & Merrill

erection three months; and exterior and interior finishing twelve months. Interior finishing would be completed within 22 months from the beginning of work. Initial project occupancy is scheduled for 1985./1/

COSTS

Project development costs would be about \$42.25 million in 1982 dollars, including \$15 million for land, \$1.5 million for design, engineering and environmental analysis, \$21 million for construction, including restoration of the 200 Kearny St. and 154 Sutter St. exteriors, and \$4.75 million for interim financing and miscellaneous costs. Office space is expected to rent for an average of \$30 per net sq. ft. per year (in 1982 dollars)./2/

APPROVAL REQUIREMENTS

The project would comply with the City Planning Code and, therefore, would not require conditional use authorization or a variance. Following certification of this EIR as adequate, accurate, and objective by the City Planning Commission, the project would be subject to review by the Commission in accordance with Resolution 8474, which requires discretionary review of all projects in the Downtown area during the period of Interim Controls./3/ The City Planning Commission would review the building design and its environmental context and adopt a resolution approving, approving with conditions, or disapproving the project. If the proposed Hallidie Building Block - Retail Historic District were adopted before project approval, the project would require a Certificate of Appropriateness, under Sec. 1006 of the City Planning Code, for exterior alterations to the 154 Sutter St. and 200 Kearny St. buildings./4/ The project sponsor would then obtain demolition, building and related permits from the Central Permit Bureau of the Department of Public Works, including relevant conditions established by the City Planning Commission in its discretionary review.

NOTES - Project Description

/1/ Theodore W. Smith, Dinwiddie Construction Co., letter, February 19, 1982.

/2/ Carl F. Danielson, Lincoln Property Co., letter, February 25, 1982, and telephone conversation, September 14, 1982.

/3/ City Planning Commission Resolution No. 8474, January 17, 1980. Board of Supervisors Ordinance 240-80, June 1, 1980, established interim limitations on use of floor area bonuses for office uses, until September 1, 1983. Floor area bonuses may still be granted for residential or hotel uses.

/4/ Landmarks Preservation Advisory Board, Resolution No. 257, October 6, 1982

III. ENVIRONMENTAL SETTING

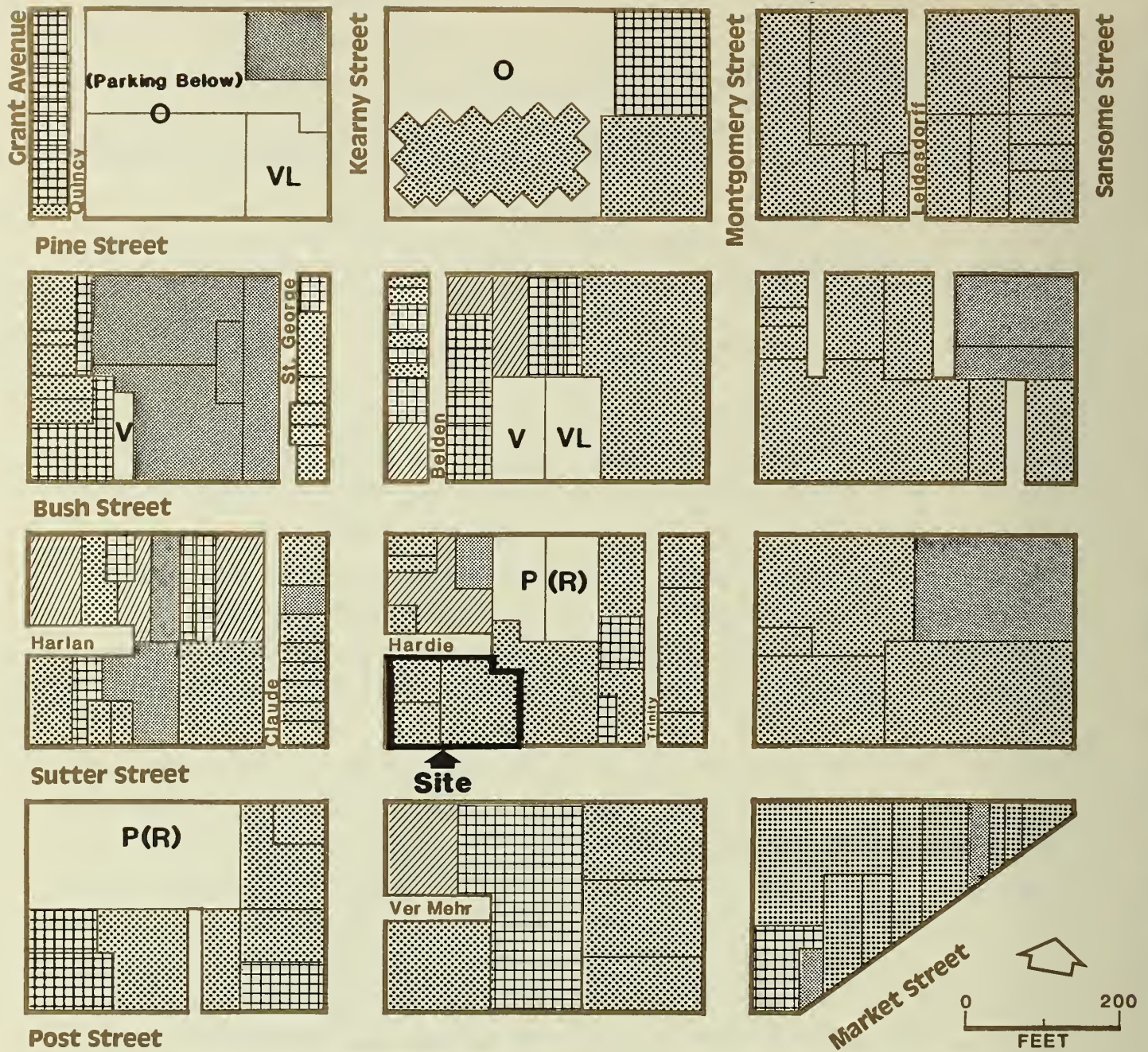
A. LAND USE AND ZONING

LAND USE

The project site is at the northeast corner of the intersection of Sutter and Kearny Sts. The site is at the western edge of San Francisco's Financial District; the district encompasses a triangular area roughly bounded by a line between Grant and Kearny Sts., and by Washington St., Mission St., and the Embarcadero. Financial District development ranges from early 20th century banking and office buildings to most of the City's recent high-rise development. The principal retail and hotel district of the City, centered around Union Square, begins about one block west of the project site.

Land uses on the project site and in the vicinity are primarily ground-floor retail with office uses on upper floors (see Figure 11, p. 30). Existing uses on the project site are mainly office above retail uses, as described in Table 2, p. 31, and on p. 52 of this section. A branch bank and a post office are located on the ground-floor of the Hallidie Building directly east of the project site. Other businesses at street level in the Sutter St. frontage of the project block include clothing and gift shops, branch banks, and stock brokers. The Crocker Galleria, part of the Crocker Bank headquarters project, is to the southeast across Sutter St. The old California Pacific Building at the east end of the block will be renovated as part of the 101 Montgomery St. project, nearing completion (see Figure 2, p. 15).

Ground-floor retail uses on the Kearny St. frontage of the project block include clothing, shoe, stationers, camera, optician, and food and beverage businesses. The Hotel Stanford, a residential hotel, is located directly north of the project site. Santa Barbara Savings and Loan is located in the building southwest of the site across the Sutter/Kearny intersection. The



SOURCE: Environmental Science Associates, Inc.

TABLE 2: EXISTING USES AT PROJECT SITE

<u>Street Address</u>	<u>Tenant</u>	<u>Floors</u>	<u>Gross Square Feet</u>		
			<u>Retail</u>	<u>Retail Support*</u>	<u>Office</u>
<u>Central Realty Building</u>					
154 Sutter	Dean Witter Reynolds (stock brokers)	2-6			50,000
160 Sutter	San Francisco Pharmacy	1	2,000	1,000	
168 Sutter	Morgan Purcell (stationers)	1	2,000	1,000	
170 Sutter	Joseph Rudee & Sons (custom tailors)	1	1,400	1,800	
176 Sutter	The Wright Shop for Gentlemen (shoes)	1	1,000	800	
<u>Adams Building</u>					
200 Kearny	B. Dalton Booksellers	2 plus mezzanine	8,000	1,500	
	Crosby-Thornton- Marshall Associates (architects)	3			4,000
	Dean Witter Reynolds	4			4,000
<u>Robins Building</u>					
220 Kearny	Tokyo Electronics	1-2	3,000	3,000	
	Vacant	2			2,000
	B. Dalton	3	1,000		
	Vacant	3			3,000
	Crosby-Thornton- Marshall Associates	4			4,000
	TOTALS		<u>18,400</u>	<u>9,100</u>	<u>67,000</u>

* Includes office space, storage and work rooms.

SOURCE: Environmental Science Associates, Inc.; Lincoln Property Co.

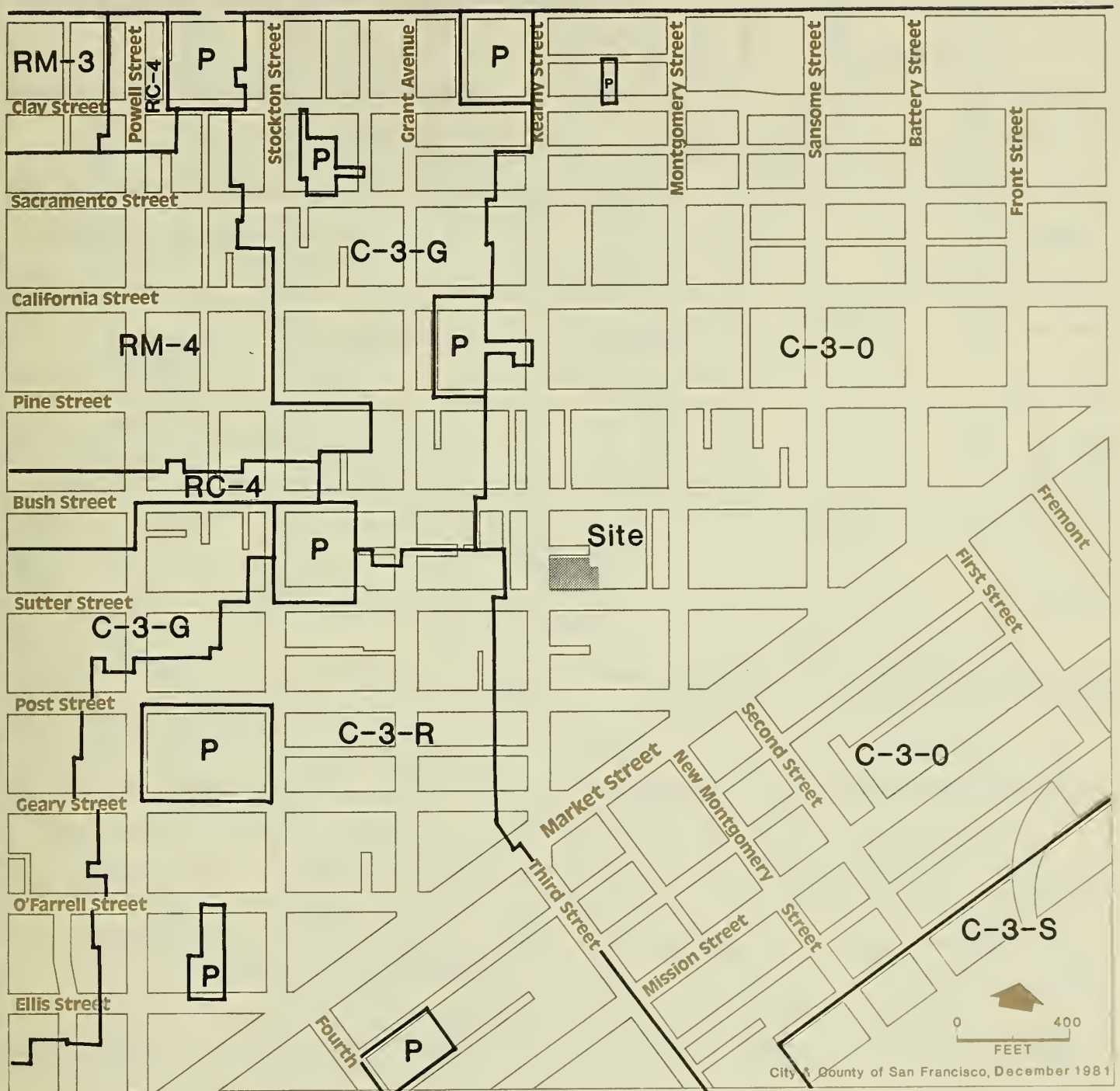
west side of Kearny St. facing the project block contains retail and office uses similar to those on the project side.

Other projects under construction, approved, or proposed in the project vicinity are shown in Figure 2, p. 15. The Crocker Tower, a 38-story office building and the Crocker Galleria, a three-level shopping mall, are part of the recently completed Crocker Bank Headquarters; the 36-story One Sansome St. building, and the 28-story 101 Montgomery St. building are under construction. Approved development includes the 25-story San Francisco Federal Savings and Loan headquarters at the southeast corner of Post and Kearny Sts., the 13-story 466 Bush St. office project on Bush near Grant, the 250 Montgomery St. project, and the 38-story 333 Bush St. office-retail-residential project. The former W. & J. Sloane furniture store at 222 Sutter St. is currently being converted to office and retail use. Proposed development includes the 26-story 350 Bush St. (Russ Tower) project and the Pine/Kearny Building.

ZONING

The site is within the C-3-0 (Downtown Office) District (see Figure 12, p. 33). Office and retail uses with a basic Floor Area Ratio (FAR) of 14:1 are permitted in this district; that is, buildings may have a basic total floor area that is 14 times the area of the site. A total floor area of about 280,910 sq. ft. would be permitted under the Code for the 20,065-sq.-ft. site. The C-3-R (Downtown Retail) and C-3-G (Downtown General Commercial) Districts begin within one-half block west of the site. These districts have a maximum permitted FAR of 10:1.

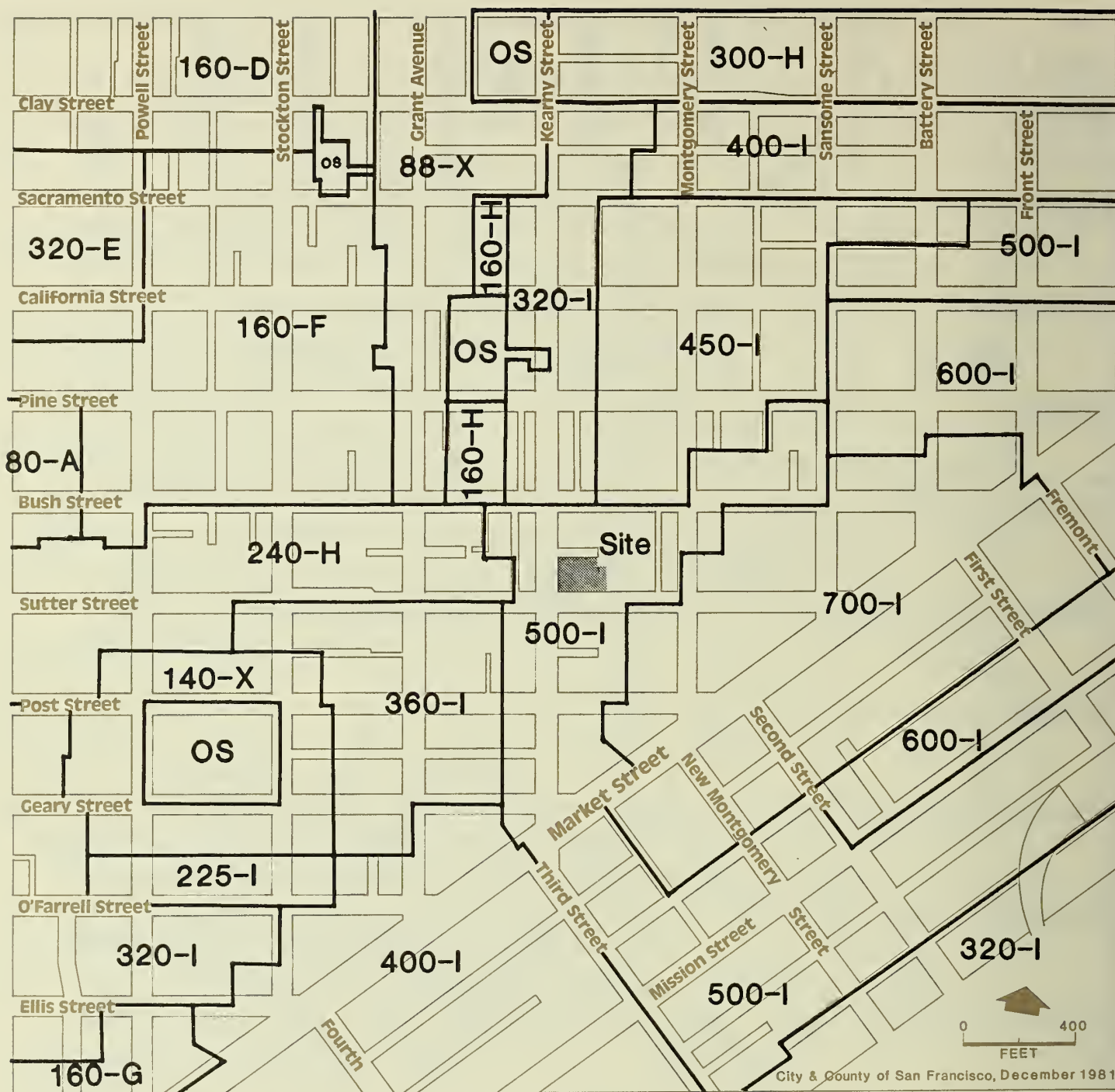
The site is in a 500-I Height and Bulk District (see Figure 13, p. 34) in which the maximum permitted building height is 500 ft. The maximum permitted building length is 170 ft. and the maximum permitted diagonal dimension is 200 ft. (both above a height of 150 ft.).



- C-3-O DOWNTOWN OFFICE DISTRICT
- C-3-R DOWNTOWN RETAIL DISTRICT
- C-3-G DOWNTOWN GENERAL COMMERCIAL DISTRICT
- C-3-S DOWNTOWN SUPPORT DISTRICT
- P PUBLIC USE DISTRICTS
- RM-3 RESIDENTIAL MIXED DISTRICTS, MEDIUM DENSITY
- RM-4 RESIDENTIAL MIXED DISTRICTS, HIGH DENSITY
- RC-4 RESIDENTIAL-COMMERCIAL COMBINED DISTRICTS, HIGH DENSITY

SOURCE: San Francisco City Planning Code

FIGURE 12:
Planning Code Land Use
Districts



HEIGHT AND BULK DISTRICTS	HEIGHT LIMIT	HEIGHT ABOVE WHICH MAXIMUM DIMENSIONS APPLY	MAXIMUM PLAN BUILDING LENGTH	DIMENSIONS PLAN DIMENSIONS
700-I	700'	150'	170'	200'
600-I	600'	150'	170'	200'
500-I	500'	150'	170'	200'
450-I	450'	150'	170'	200'
400-I	400'	150'	170'	200'
360-I	360'	150'	170'	200'
320-I	320'	150'	170'	200'
225-I	225'	150'	170'	200'
300-H	300'	100'	170'	200'
240-H	240'	100'	170'	200'
160-H	160'	100'	170'	200'
160-G	160'	80'	170'	200'
160-F	160'	80'	110'	140'
320-E	320'	65'	110'	140'
160-D	160'	40'	110'	140'
80-A	80'	40'	110'	125'
140-X	140'	Bulk limits not applicable		
88-X	88'	Bulk limits not applicable		
OS	Conformity with objectives, principles and policies of the Master Plan.			

FIGURE 13:
Planning Code Height
and Bulk Districts

SOURCE: San Francisco City Planning Code

B. ARCHITECTURAL RESOURCES

The three buildings occupying the project site have been rated for architectural/historical quality in two surveys. The 1976 Architectural Survey conducted by the Department of City Planning (DCP) rates the architectural quality of all structures within San Francisco. A survey by Charles Hall Page and Associates for the Foundation for San Francisco's Architectural Heritage (Heritage) rates structures on the basis of architecture, history and architectural history within the downtown area./1/ The 1976 DCP survey rates structures from a low of "1" to high of "5"; the Heritage survey rates structures from a low of "D" to a high of "A". (The surveys and rating systems are further discussed in Appendix B-1, pp. 185-186.) The three buildings and their ratings are described below:

200 Kearny Street (Adams Building)

This four-story plus mezzanine (referred to in this report as five-story) building is rated "3" in the DCP Inventory and "A" in the Heritage Survey. The structure is a two-part vertical composition (a base retail element and upper office element with separate facade treatments) with Gothic-inspired ornamentation and large square windows. It is of masonry, steel and wood frame interior construction with a white (matte finish) terra cotta cladding. The facade is detailed in glazed terra cotta and the building is capped with a hanging cornice (see Figure 14, p. 36). It was constructed in 1908 and is characteristic of retail buildings of that era in the area. The architect was Washington J. Miller. The main modifications to the exterior have been removal of the decorative canopy at the corner entrance and alteration of the mezzanine windows./2/

220-226 Kearny Street (Robins Building)

This four-story commercial and office building is rated "1" in the DCP Inventory and "C" (of contextual importance) in the Heritage Survey. It is a two-part vertical composition with large three-part (Chicago-style) windows. The building is constructed of brick with an unglazed terra cotta surface treatment. Stylized Corinthian colonnettes are found on the upper levels of

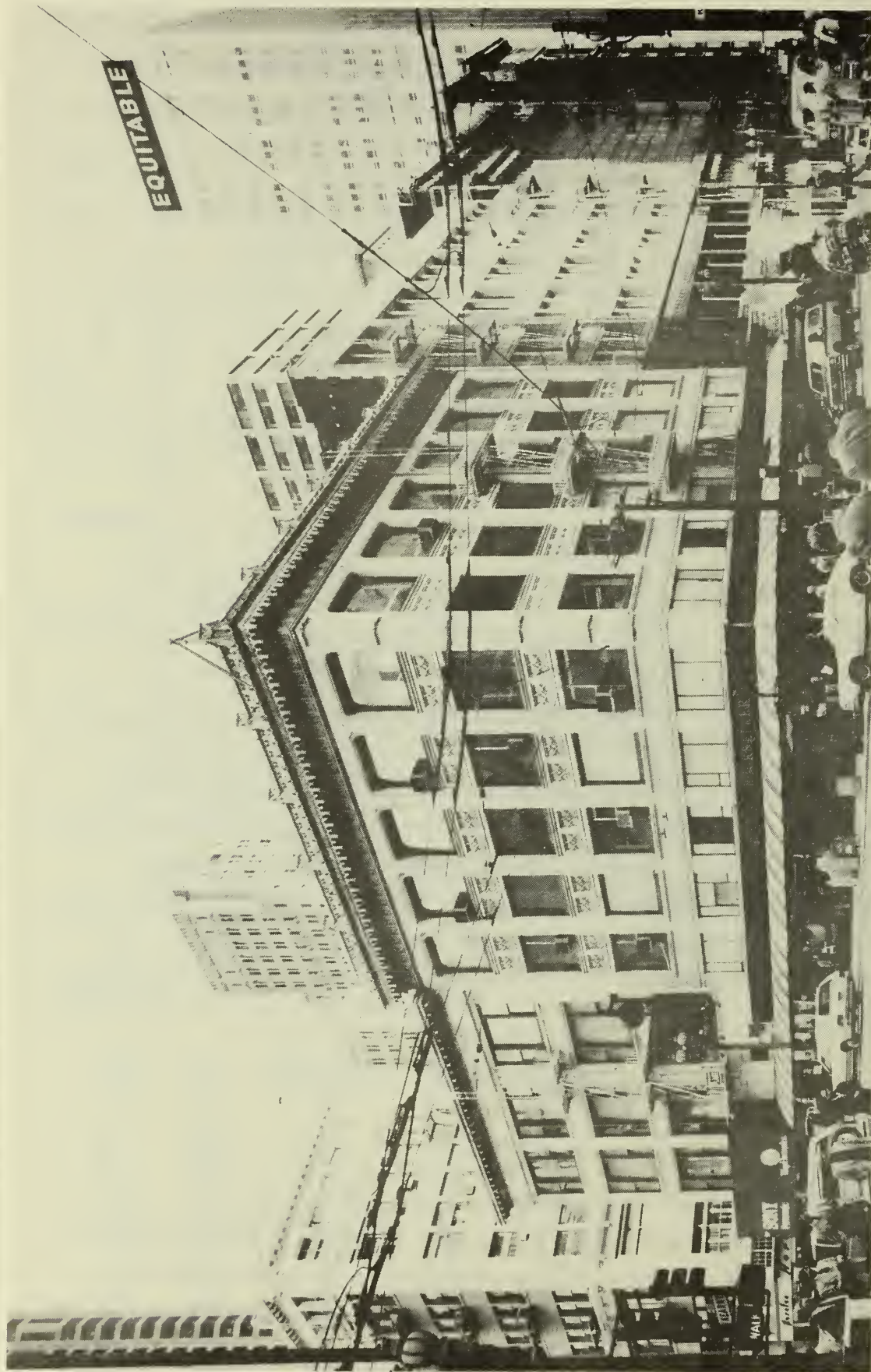


FIGURE 14:
View of Project Site from Sutter
and Kearny Streets

SOURCE: Environmental Science Associates, Inc.

the building (see Figure 15, p. 38). The structure was designed by T. Paterson Ross and built in 1907. It was remodeled and enlarged in 1908./2/

154-176 Sutter (Central Realty Building)

This six-story commercial and office structure is rated "2" in the DCP Inventory and "B" in the Heritage Survey. It is a two-part vertical composition with a two-story plate glass commercial base and three-part windows above the second floor. It is of masonry and steel frame construction with a glazed brick and terra cotta facade. The building was remodeled in the 1930's maintaining its large glass areas but framing them in an Art Deco veneer of blue and green tiles at the base. The Renaissance-Baroque cornice was removed in the early 1970's for safety reasons. (See Figure 16, p. 39.) The structure was designed by Sylvain Schnaittacher and was built in 1907./2/

Buildings rated A or B in the Heritage survey, or 3 or higher in the DCP survey have been placed on a List of Architecturally and/or Historically Significant Buildings in the Downtown, adopted by the City Planning Commission./3/ A November 1981 resolution states the City Planning Commission's concern for preservation of buildings on this list. The resolution acknowledges the Director of Planning's intent to recommend denial of any project that would propose to demolish architecturally significant buildings included on this list./4/

Other buildings in the project vicinity are also included in the DCP and/or Heritage Surveys (see Figure 17, pp. 40-41). Among these is the Hallidie Building, adjacent to the site at 130 Sutter St. The structure is rated "A" by Heritage and "5" by DCP. It is City Landmark No. 37 and is listed on the National Register of Historic Places./5/ The French Bank Building, 108 Sutter St., three buildings east of the site, is rated "A", and "4" by DCP. The California Pacific building at Montgomery and Sutter Sts. is rated "B", and "2" by DCP. The exterior of the latter building is being restored and the interior incorporated into the 101 Montgomery St. project. The Sutter St. buildings on the project block have been cited as "...one of the finest and most important ensembles of early twentieth-century architecture in downtown San Francisco and in the western United States..."/6/

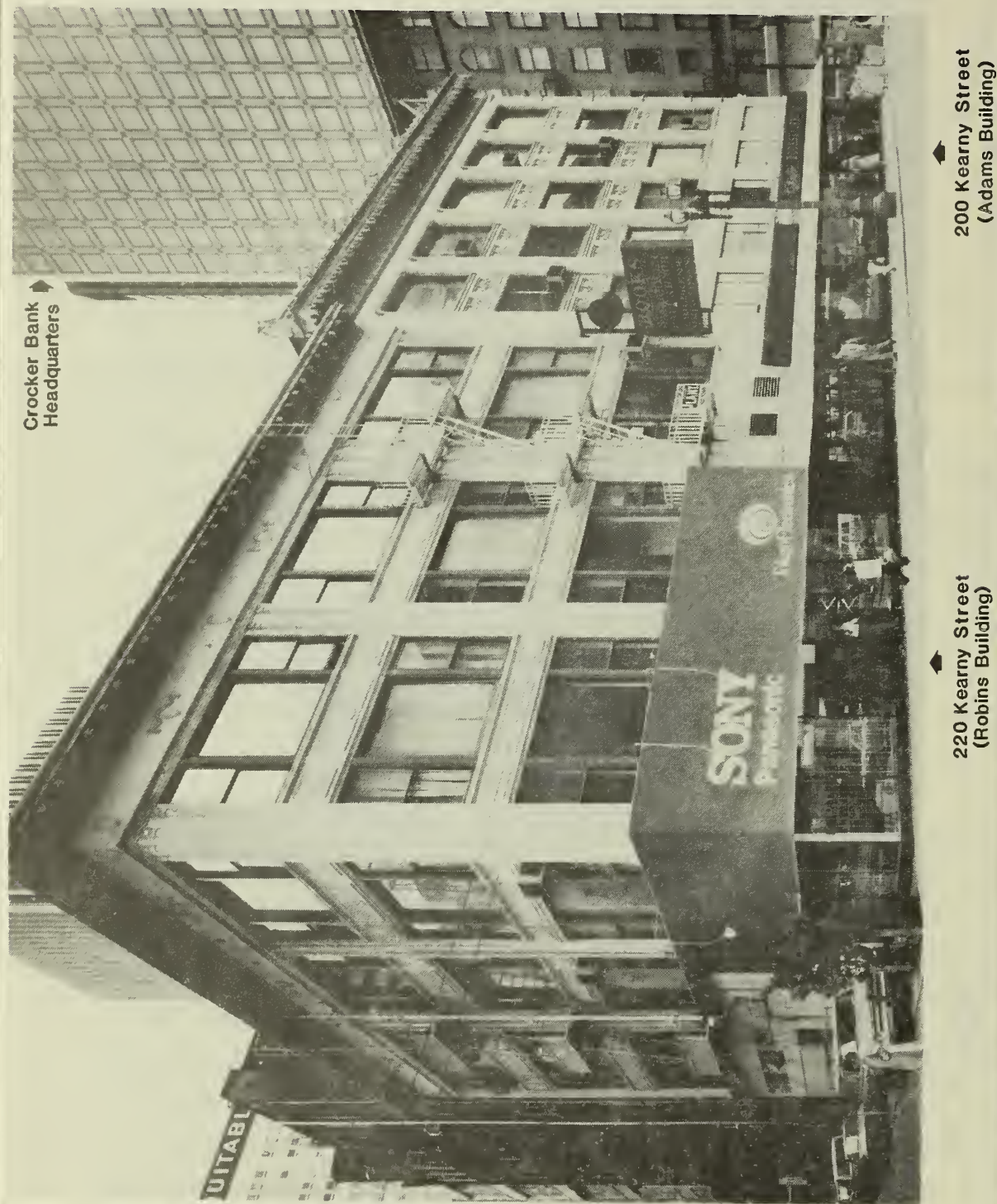


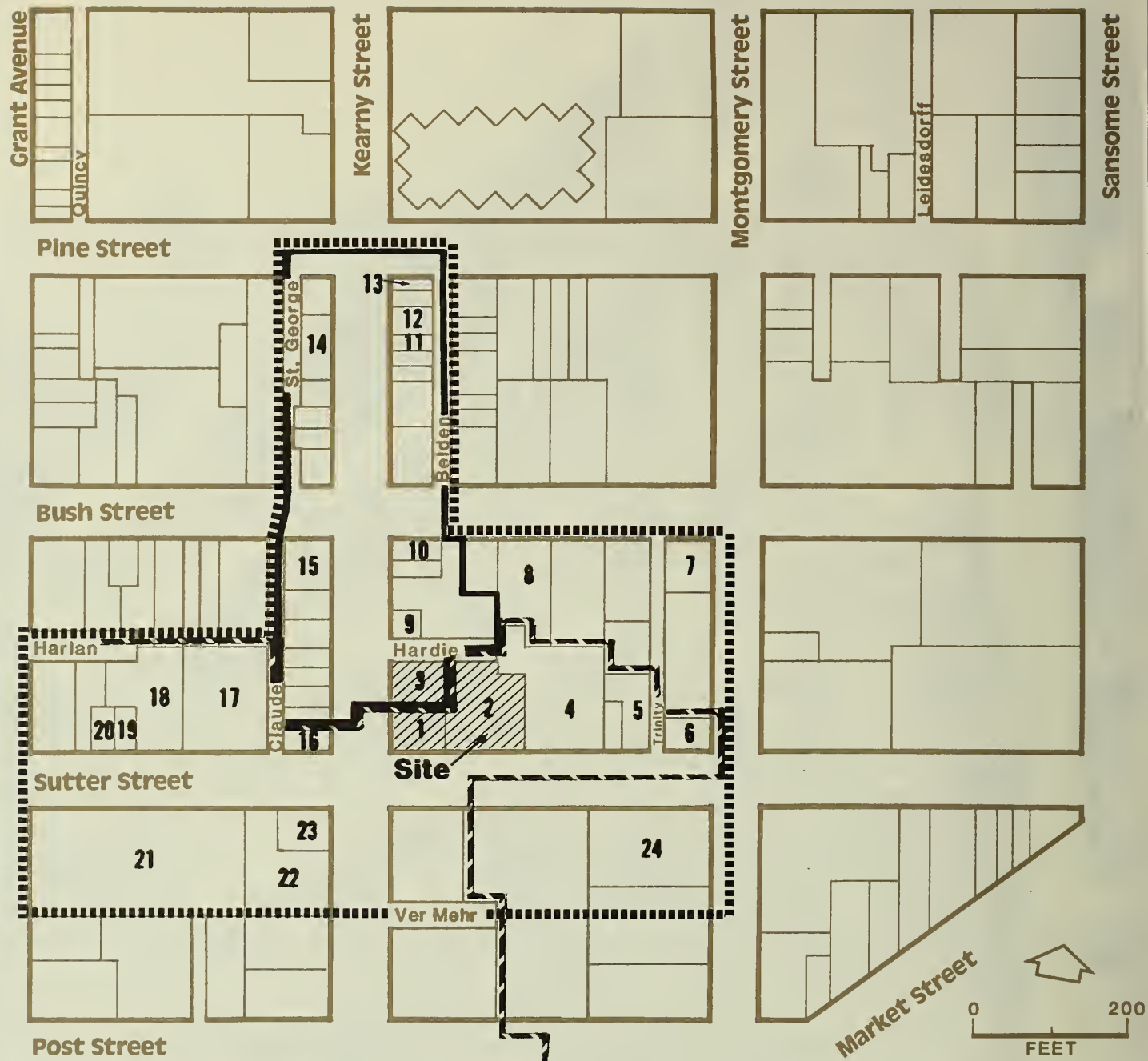
FIGURE 15:
View of Project Site - 200
Kearny and 220 Kearny Street

SOURCE : Environmental Science Associates, Inc.



FIGURE 16:
View of Central Realty Building
(154 Sutter St.)

SOURCE: Environmental Science Associates, Inc.



Legend

----- Study Area Boundary

Numbered Sites - See Following Page

Potential Historic Districts*

----- Retail - Shopping (full boundaries not shown to west)

----- Kearny Street

* Identified in Splendid Survivors, but not adopted by the City to date. (See Appendix B-2, p.187)

FIGURE 17:
Architectural Resources
in Site Vicinity

SOURCE: Environmental Science Associates, Inc.,
San Francisco Department of City Planning; Splendid Survivors,
prepared by Charles Hall Page & Associates, Inc. for The
Foundation for San Francisco's Architectural Heritage

(continued)

FIGURE 17: ARCHITECTURAL RESOURCES IN SITE VICINITY (continued)

<u>Building</u>	<u>S.F. DCP Inventory*</u>	<u>Heritage Survey*</u>
<u>On the project site</u>		
1. 200 Kearny, Adams Building***	3	A
2. 154 Sutter, Central Realty Building***	2	B
3. 220 Kearny, Robins Building	1	C
<u>In the project vicinity</u>		
4. 130-150 Sutter, Hallidie Building** ***	5	A
5. 108-110 Sutter, French Bank Building***	4	A
6. 105 Montgomery, California Pacific Building***	2	B
7. 149-157 Montgomery, Alexander Building	0	B
8. 355 Bush, Financial Center Garage	0	B
9. 240-244 Kearny, Marston Building	Not rated	B
10. 381-383 Bush, Alto Building	2	B
11. 344 Kearny, Harrigan Weidenmuller Company	2	B
12. 346 Kearny	1	B
13. 362 Kearny	Not rated	B
14. 333-343 Kearny, MacDonough Building	1	B
15. 251 Kearny, Charleston Building	0	B
16. 201 Kearny	2	B
17. 216-220 Sutter, W & J Sloane Building	2	A
18. 250-254 Sutter, Goldberg Bowen Building	4	A
19. 256-262 Sutter, Sather Building	2	B
20. 266-270 Sutter, Bemiss Building	4	A
21. 255 Sutter, The White House	4	A
22. 153 Kearny, Bartlett Doe Building	1	B
23. 161 Kearny, Eyre Building	2	B
24. 111 Sutter, Hunter-Dulin Building	5	A

* See Appendix B-1, pp. 185-186, for a discussion of surveys and ratings. Buildings rated A or B by Heritage, or 3 or above by the DCP survey, are included on the List of Architecturally and/or Historically Significant Buildings in the Downtown, adopted in City Planning Commission Resolution No. 8600.

** City Landmark and listed on National Register of Historic Places.

*** Part of proposed Hallidie Building Block - Retail Historic District recommended for approval as a City landmark district by the Landmarks Preservation Advisory Board, Resolution No. 257, October 6, 1982.

The site is within two proposed historic districts identified by Heritage as eligible for designation as National Register Historic Districts. The proposed Retail - Shopping Historic District and the Kearny Street Historic District are shown on Figure 17, pp. 40-41. (See Appendix B-2, p. 185, for a discussion of these potential districts.)

The Landmarks Preservation Advisory Board has recommended to the City Planning Commission designation of a City historic district, the Hallidie Building Block - Retail Historic District.^{/7/} The district would center around the Hallidie Building, City Landmark No. 37 (130 Sutter St.), and include the five other buildings on this side of the project block: 105 Montgomery St., 108-110 Sutter St., 126 Sutter St., 154 Sutter St., and 200 Kearny St. (The latter two buildings are part of the project site.) The proposed City historic district is also within the proposed Retail - Shopping Historic District identified by Heritage. Creation of a City historic district requires approval by the Planning Commission and the Board of Supervisors. If the district were established prior to approval of the project, the project would require a Certificate of Appropriateness for alterations to the exteriors of the 154 Sutter St. and 200 Kearny St. buildings, pursuant to Section 1006 of the City Planning Code.

NOTES - Architectural Resources

/1/ Foundation for San Francisco's Architectural Heritage, Splendid Survivors, California Living Books, San Francisco, 1979.

/2/ Heritage, Splendid Survivors, pp. 140,141,171

/3/ San Francisco City Planning Commission Resolution No. 8600, May 29, 1980.

/4/ San Francisco City Planning Commission Resolution No. 9240, November 19, 1981.

/5/ The National Register of Historic Places is a list of cultural resources which are significant in architecture, history, and culture to the nation, the states and individual localities; it is maintained by the U.S. Department of the Interior. Although listing on the National Register provides some legal protection from alteration or demolition by federally funded or licensed projects, it offers no legal protection against alteration or demolition by non-federal projects.

/6/ Heritage, Splendid Survivors, p. 249.

/7/ Landmarks Preservation Advisory Board, Resolution No. 257, October 6, 1982

C. URBAN DESIGN, WIND AND SHADOW

URBAN DESIGN

The project site is part of the north frontage of Sutter St. between Montgomery and Grant Sts. which has a cohesive character. Buildings are similar in scale, ranging from four to 12 stories, and are built out to the lot lines, creating a continuous street facade (see Figures 18 and 19, pp. 44 and 45). The varied surface treatment includes masonry, brick, terra cotta and glass curtain wall facades, all but the latter typical of post-earthquake architecture of the downtown. The pedestrian level includes storefront display windows and ornamented building facades.

The three buildings on the site, at the western border of the Financial District, contrast in scale with newer high-rise office buildings in the vicinity (see Figure 18, p. 44). The site buildings are similar in scale to many buildings of the Retail District to the west, and low-rise buildings scattered among high-rises in the Financial District. The project block buildings range in height from three to 28 stories. Along the north frontage of Sutter St., buildings decrease in height east to west from Montgomery St. to Kearny St., (from the 12-story California Pacific building at Sutter and Montgomery Sts. to the five-story 200 Kearny St. building on the project site), providing a transition in scale between the Financial and Retail Districts. The 28-story 101 Montgomery St. building is nearing completion on the project block (east of the site) and a 38-story building has been approved northeast of the project site at 333 Bush St. Larger-scale buildings of the Financial District include the 52-story Bank of America building located two blocks north of the site, the scale and dark color of which make it a principal visual landmark of the City skyline. Other nearby high-rise development includes the 38-story Crocker Bank building at Post and Kearny Sts., the 44-story Wells Fargo Bank building at 44 Montgomery St., the 25-story Equitable Life building at 120 Montgomery St., and the 25-story 180 Montgomery St. building. Approved projects include the 25-story San Francisco Federal Savings and Loan headquarters at the southeast corner of Post and Kearny Sts., one block south of the site, and the 23-story 580 California St. building at Kearny St., three blocks north.



Project Site

NOTE: Part of Kearny Street frontage
of project site not visible.

SOURCE: Peter Bosselman

FIGURE 18:
View East down Sutter Street
near Kearny Street

California Pacific
Building

French Bank
Building

Hallidie
Building

Project
Site
←→



FIGURE 19:
View West up Sutter Street
Near Montgomery Street

SOURCE: Environmental Science Associates, Inc

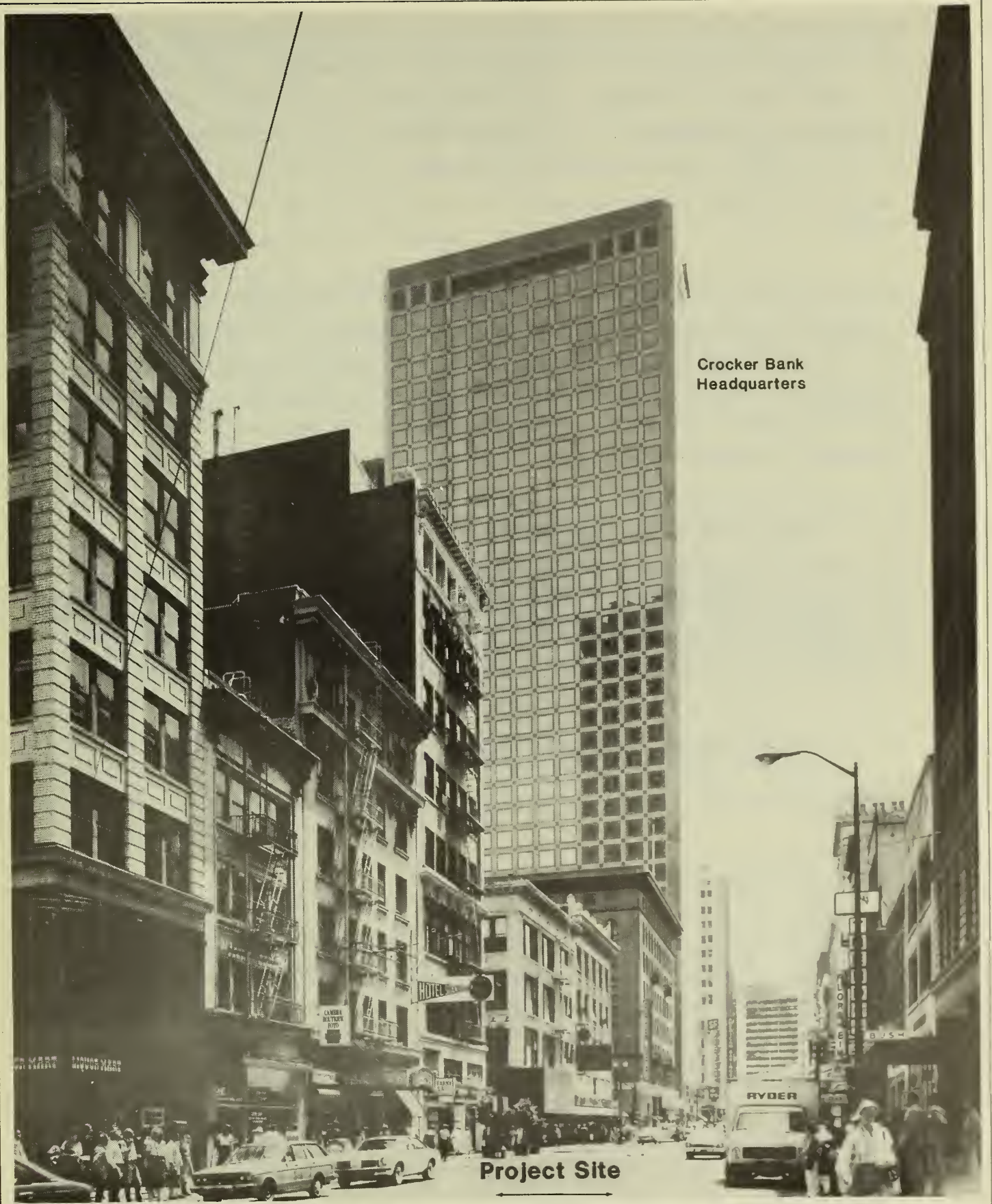
In addition to the site's prominence at the corner of Sutter and Kearny Sts., portions of the site buildings are visible from two intersections on Market St.: the west and south facades of the Adams Building (200 Kearny St.) are visible from Market St. at Kearny; the south facades of the Central Realty building (154 Sutter St.) and the Adams Building are visible from Market St. at Sansome and Sutter Sts. Short-range views away from the site, looking east on Sutter St., terminate with high-rise development at Market St. (see Figure 18, p. 44). Looking west, the 36-story Hyatt Hotel on Union Square is a visual landmark that contrasts with older, mid-scale buildings. Views to the north along Kearny St. include high-rise buildings among lower-scale development. The Bank of America dominates this view along Kearny St., partially obstructing the view of Telegraph Hill. Looking south along Kearny St., the view terminates at buildings south of Market St.; see Figure 20, p. 47. (The intersection of Kearny, Market, and Third Streets is not a perpendicular alignment; see Figure 1, p. 14.) No long-range views of San Francisco Bay or the City are available from existing buildings on the site.

The site is not visible from long-range viewpoints to the west and the south, such as Twin Peaks and Potrero Hill, due to intervening high-rise buildings.

WIND

Wind conditions in San Francisco help determine pedestrian comfort on sidewalks and in other public areas. In downtown areas, flat-walled buildings can funnel wind flows into narrow areas, increase air turbulence, and divert winds downward to street level.

Westerly, southwesterly, and northwesterly winds are the most frequent and strongest winds during all seasons in San Francisco.¹¹ (In meteorology, a west wind is one that blows from the west.) On an annual basis, west winds blow nearly one-half of the time; they are also the strongest, averaging over seven miles per hour year-round. Southwest winds are typically the second most frequent and second strongest winds. Annually, northwest winds are generally less frequent, with lower average speeds, than west and southwest winds.



Crocker Bank
Headquarters

Project Site

FIGURE 20:
View South down Kearny Street
near Bush Street

SOURCE: Environmental Science Associates, Inc.

Average wind speeds are highest during summer and lowest in winter. However, the strongest peak winds occur during winter, when average speeds of 27 miles per hour or more for one hour have been recorded. The highest average wind speeds are in mid-afternoon, and the lowest are in the early morning. Peak winds are likely to occur throughout the day.

SHADOW

Existing structures cast light and shadow patterns on streets and sidewalks in the project vicinity. Portions of Sutter and Kearny Sts. within one block of the project site and Hardie Place north of the site are shaded by existing structures throughout the day and at all seasons of the year. Existing and projected shadow patterns for different times of the day and year are discussed in detail in Section IV., Environmental Impact, pp. 80 - 85.

NOTE - Urban Design, Wind, and Shadow

/1/ The discussion of wind speeds and directions is based on U.S. Weather Bureau data collected over 32 years in the early 1900's, at 460 California St. near Montgomery St. about three blocks northeast of the site, and on Bay Area Air Quality Management District data collected over two years in the 1970's, at 939 Ellis St. near Van Ness Ave. about 1.1 miles southwest of the site.

D. EMPLOYMENT, HOUSING AND FISCAL FACTORS

EMPLOYMENT

Local and Regional Office Space and Employment

San Francisco is the major office center in the Bay Area with approximately 57.2 million gross sq. ft. of office space (based on records on file with the Department of City Planning; see Appendix C, Table C-1, pp. 188-189). During the 1970s, space in downtown office buildings was added at a rate of about 1.5 million sq. ft. per year. In 1981 and 1982, the average rate of office space additions was about two million gross sq. ft. annually. A total of approximately 32.3 million sq. ft. of office space was constructed between 1960 and 1981.

III. Environmental Setting

About 8.9 million square gross feet of office space was under construction as of January 27, 1983. About 5.9 million gross sq. ft. has been formally approved but is not yet under construction, and an additional 4.0 million gross sq. ft. of office space is under formal review. Together these total 18.8 million gross sq. ft. of new office space. About 1.5 million gross sq. ft. of existing office space has been or is proposed to be demolished to clear the sites for these office developments. This results in a net addition of 17.3 million gross sq. ft. of new office space in Downtown San Francisco. For analysis purposes, the 17.3 million gross sq. ft. of new space is used, for it refers to the amount of new construction in excess of existing space in terms of gross sq. ft. of floor space. If all projects were completed, San Francisco would have a total of approximately 74 million sq. ft. of office space.

The above numbers for new office space and the cumulative analyses in this report are based on a list prepared by the Department of City Planning, including office buildings, which on January 27, 1983 were in one of three categories: 1) under construction; 2) approved by the Department of City Planning but not yet under construction; and 3) under formal review. These buildings and the total sq. ft. of office and retail space in each category are listed in Appendix C, Table C-2, pp. 190-192. (Buildings on the list are located in the C-3 district, the Van Ness corridor west to the Central Freeway, the South of Market area south to the Central Freeway, Division Street, Mission Creek, and China Basin, and the northeastern waterfront east of Telegraph Hill.)

The cumulative list contains only those buildings which are, or have been, formally under review by the Department of City Planning and the Department of Public Works. Not included are projects which are in an early planning stage but for which details as to types of use and floor areas of office and retail space are not available. Thus, excluded are buildings in the Yerba Buena Center Redevelopment Area, Mission Bay of the Southern Pacific Land Company, the Rincon Point - South Beach Redevelopment Area, and unfunded State and Federal office building proposals. The cumulative list does contain those office buildings in the Yerba Buena Center Redevelopment Area which are under construction or for which Land Disposition Agreements have been approved, and

which have definitely identified floor area figures. The San Francisco Redevelopment Agency is currently considering a range of additional amounts of office space, but the nature and scale, including floor area, are tentative. Therefore, potential office space in Yerba Buena Center is not included. Hotel projects have not been included in the cumulative analyses because hotel uses have different peaking characteristics from office buildings and generally do not significantly affect peak-hour traffic or transit.

The totals indicated in Table C-2 may differ from those shown in EIRs published at an earlier date as the totals are based on the status of projects as of January 27, 1983. Projects included in earlier totals have been removed from the cumulative analyses as they have been withdrawn from formal review or for other reasons of inactivity. Projects not included in earlier totals have been added to the cumulative totals as they have been activated. In sum, the lists used for the cumulative analyses in this report, totaled in Table C-2, represent to the extent practicable the most current official record of office buildings completed, in progress, or in the review process.

The largest employment growth in the Bay Area from 1970 to 1978 occurred in the office sector, with over 60% of the regional increase in total work force. In 1978, a total of 1.2 million people held office jobs in the Bay Area, with nearly 70% employed by firms that in some way serve the local populations. Of the 280,000 office workers employed in San Francisco, over 55% worked for employers such as national or regional headquarters which serve not only the local population but a wider geographical area as well./1/

Vacancy Rates

Based on a 1982 city-wide survey of 290 office buildings, the San Francisco Building Owners and Managers Association (BOMA) reported a city-wide vacancy rate of 6%./2/ This rate is an increase over the 1.04% rate reported by BOMA in its 1981 survey and 3.69% in an earlier 1982 survey. According to a December 1982 Coldwell Banker survey, the vacancy rate in downtown San Francisco office buildings (new, existing and major renovations) was 5.7% between September and December 1982./3/ The 5.7% rate is an increase from

0.1% during June 1981 and 3.4% during June 1982. The vacancy rate for December 1982 is the highest that has been reported for San Francisco since Coldwell Banker started this survey in 1978. The current 5.7% vacancy rate is the sixth lowest of the 24 major downtown financial districts surveyed by Coldwell Banker./3/ For comparison, as of December 31, 1982, the vacancy rate was 10.3% nationally; 8.3% for Chicago; 4.3% for midtown Manhattan; and 5.3% for Houston./3/

Both surveys indicate a short-term increase in the vacancy rate for downtown office buildings. This increase is the result of several factors, including an increase in the amount of available office space (due to new space being completed and space available for sublease), a short-term decrease in the demand for office space, and the continuing nationwide economic recession. Higher vacancy rates point to a softer office market than has existed in recent years. However, vacancy rates between 5% and 7% are considered a normal competitive market; the demand for downtown office space remains competitive in relation to available supply.

The historic shortage of office space in San Francisco has increased the demand for and stimulated the development of office space elsewhere in the Bay Area. Some businesses have responded to this situation by moving their clerical, support, and production departments to outlying areas while maintaining headquarters and main branch offices in San Francisco. For example, there has been a noticable increase in the development of office space in the City of Oakland and San Mateo and Contra Costa Counties. Approximately 6.0 million sq. ft. of office space in nine new buildings are proposed for Oakland over the next 10 years, although it is not known how much of this space will be built,/4/ about 17 million sq. ft. of office space is proposed or under construction along the US 101 corridor in San Mateo County,/5/ and 15.8 million sq. ft. of space is proposed or under construction in Contra Costa County, according to one source./6/

Commercial Rents

Rents for commercial office space in the downtown Financial District increased dramatically, almost tripling in the last decade (from \$8.50 per sq. ft. in 1970 to \$23 per sq. ft. in 1980)./7/ High quality, new space leases for \$25

to \$35 per sq. ft. annually; these rates are expected to increase to between \$40 and \$50 per sq. ft. in 1983./7/ Rents in older buildings in the Financial District are less expensive, averaging between \$10 and \$15 per sq. ft. Existing, converted and rehabilitated commercial office space located South of Market rents for between \$12 and \$15 per sq. ft.; new South-of-Market office space is expected to rent for about \$23 per sq. ft./8/

San Francisco rents are about 35% higher overall than commercial rents in Oakland (\$17 to \$20 per sq. ft.); the Peninsula (\$18 to \$22 per sq. ft.) and Contra Costa County (\$18 to \$20 per sq. ft.)./8,9/

Employment and Tenant Mix at the Project Site

Businesses at the project site currently employ about 610 persons. Employee distribution, shown in Table 3, p. 53, is 533 office, 63 retail, and 10 clothing manufacturing workers (part of the shirt maker operation). The office tenant in the 154 Sutter St. building is Dean Witter Reynolds; retail tenants include a pharmacy, men's shoe store, stationer, and a custom shirt maker. The 200 Kearny St. building is occupied by a B. Dalton bookstore and additional Dean Witter Reynolds space; 220 Kearny St. includes additional B. Dalton space, an architectural firm, and an electronics store.

HOUSING

Regional and Local Housing Characteristics

A description of housing characteristics in the region and San Francisco is included in EE.80.268, Five Fremont Center, Final EIR, certified March 12, 1981, pp. 37-49, hereby incorporated by reference pursuant to California Environmental Quality Act (CEQA) guidelines./10/ In summary, information on the housing stock includes amount, growth factors, vacancy rates and purchase and rental costs. Both regional and San Francisco housing stock are characterized by low growth rates, low vacancy rates, and high rental and purchase costs in relation to typical wages paid. This combination of factors has tended to constrict the supply and affordability of housing in San Francisco. Since publication of the Five Fremont Center FEIR, updated

TABLE 3: EXISTING EMPLOYMENT AT PROJECT SITE*

TENANTS	GROSS SQ. FT.	EMPLOYEES*
<u>154 Sutter St.</u>		
Dean Witter Reynolds (stock brokers)	50,000	500
San Francisco Pharmacy	3,000	7
Morgan Purcell Stationers	3,000	8
Wright Shop for Gentlemen (shoes)	1,800	6
Joseph Rudee & Son, Inc. (custom shirt makers)	3,200	14**
<u>200 Kearny St.</u>		
B. Dalton Booksellers	9,500	28
Crosby-Thornton-Marshall Associates (architects)	4,000	(See 220 Kearny St.)
Dean Witter Reynolds	4,000	(See 154 Sutter St.)
<u>220 Kearny St.</u>		
Crosby-Thornton-Marshall Associates	4,000	33
Tokyo Electronics	6,000	10
B. Dalton	1,000	(See 200 Kearny St.)
Vacant	<u>5,000</u>	<u> </u>
TOTALS	94,500 sq. ft.	606

*As of March 1982.

** Four retail and ten clothing manufacturing employees.

SOURCE: Lincoln Property Co.; Environmental Science Associates, Inc.

information based upon recently available data from the 1980 U.S. Census for San Francisco indicates that the vacancy rate for owner-occupied housing was 1.0% and the vacancy rate for rental units was 4.2%. The rental vacancy rate was 2.68% of the total housing stock./11/ The median value of noncondominium owner-occupied units was \$104,600 and the median rent was \$267 in 1980./11/ Inflating these figures based on the 16.7% increase in the Consumer Price Index between April 1980, the date of the Census, and March 1982, would yield median home value and rent of \$122,100 and \$310, respectively. Rental price increases may have been moderated by the Rent Stabilization Ordinance which limits rent increases on most units to seven percent per year.

FISCAL FACTORS

The assessed value of the three properties on the site in fiscal year 1981-82 was \$2,731,000 (property is now assessed at 100% of fair market value). At the 1981-82 property tax rate of \$1.19 per \$100 assessed valuation, the properties yielded about \$32,500 in property tax revenues, distributed as shown in Table 6, p. 95. General Fund revenues to the City and County of San Francisco from the non-BART sales tax, payroll tax, gross receipts tax, and property tax will total about \$242,000 from the site in 1981-82.

The City incurs costs in serving the existing buildings. Police, fire, and general government expenditures are supported primarily by the General Fund. Most street maintenance, street improvement, and traffic control costs are supported by other revenue sources such as fees, fines, and federal and state aid.

NOTES - Employment, Housing, and Fiscal Factors

/1/ Association of Bay Area Governments (ABAG) and Bay Area Council, December 1979, San Francisco Bay Area Economic Profile.

/2/ Elmer Johnson, Building Owners and Managers Association, Telephone Communication, December 22, 1982.

/3/ Coldwell Banker, "Office Vacancy Index of the United States," December 31, 1982. San Francisco vacancy rates are part of a national survey of 24 major downtown districts conducted quarterly. A copy of the December 31, 1982 survey is on file and available for review at the Office of Environmental Review, 450 McAllister St., 5th Floor.

III. Environmental Setting

/4/ City of Oakland, Department of City Planning; "Major Building in the Central District," January 26, 1982.

/5/ "Proposed Specific Plan: Bayshore Office Park and Baylands Development Area, Brisbane, California," Blayney-Dyett, Urban and Regional Planners, July 1982, and "Travel Impacts of Proposed Development on the Peninsula Along Route 101," Metropolitan Transportation Commission, September 9, 1982.

/6/ "Proposed East Bay Office/Industrial Development," People For Open Space, October 1982.

/7/ Department of City Planning Memorandum to the City Planning Commission, "South of Market Interim Controls," January 26, 1982.

/8/ Derek Morris, Leasing Agent, Cushman and Wakefield, telephone communication, May 7, 1982; Valerie Miles, Senior Broker, Coldwell Banker-Oakland Office, telephone communication, April 23, 1982; and Jeffery Nebel, Leasing Agent, Coldwell Banker, telephone communication, April 30, 1982.

/9/ Assuming that demand remains relatively constant, rents in outlying areas are expected to increase substantially in 1983 and 1984 for new, high quality space. One reason for the comparatively low rents in outlying areas is that the available space is not competitive, high quality (headquarters-type) space. For example, new buildings in Oakland are expected to lease for \$24 per sq ft. in 1983, which would be comparable to rent for new buildings in the South of Market area.

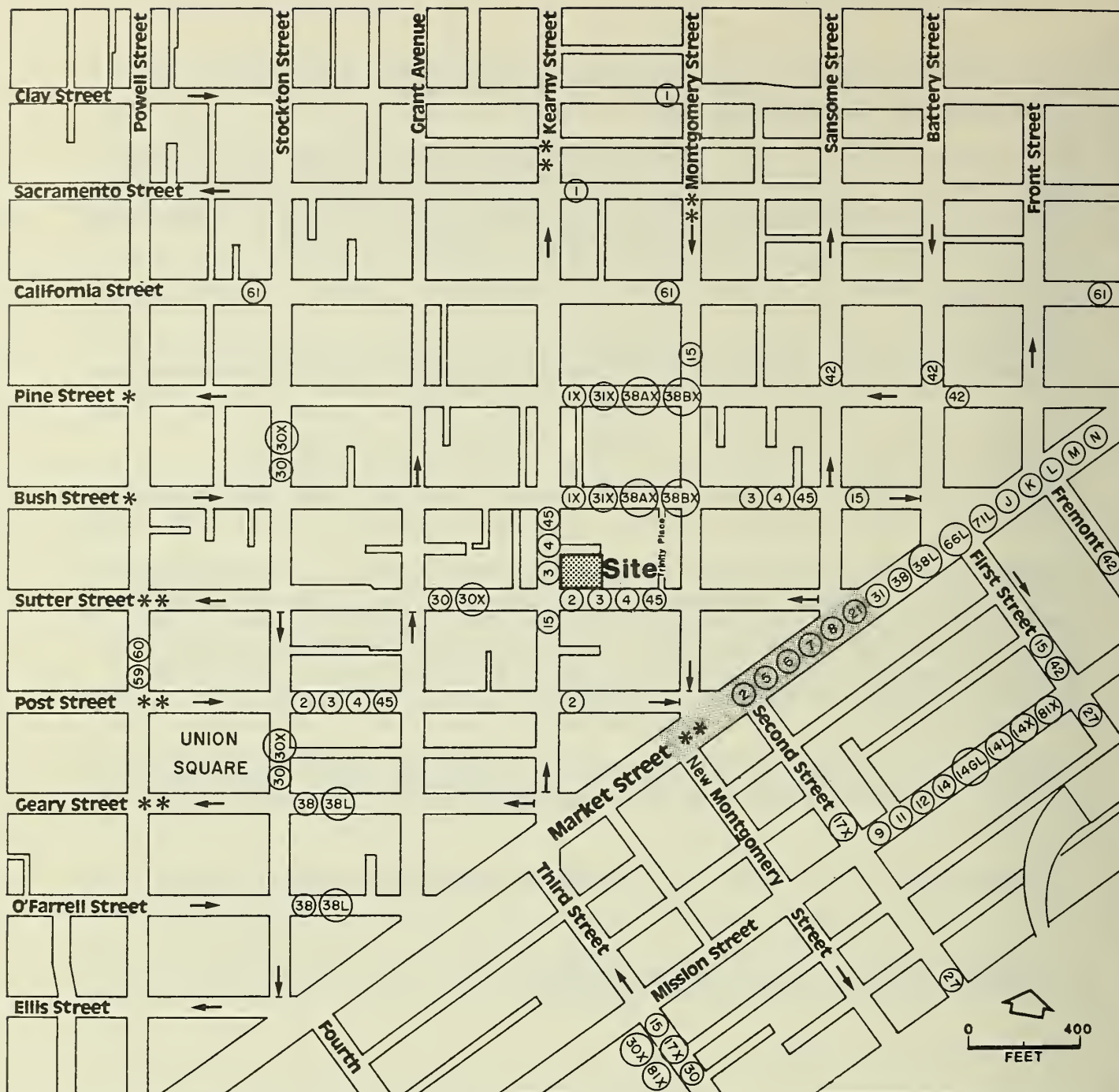
/10/ California Administrative Code, Title 14, Section 15140. This report is available for review at the Office of Environmental Review, 450 McAllister St., 5th floor.

/11/ Department of City Planning, "1980 Census Information," March 1982.

E. TRANSPORTATION, CIRCULATION AND PARKING

STREET AND FREEWAY SYSTEM

The street network in the project vicinity is shown in Figure 21, p. 56. Kearny is one-way northbound, Bush one-way eastbound, Montgomery one-way southbound and Sutter one-way westbound. The Transportation Element of the San Francisco Comprehensive Plan designates Pine and Bush Sts. as major thoroughfares./1/ Sutter, Post, Kearny, Montgomery and Geary Sts. are designated as transit arterial streets in the Downtown Transportation Plan./2/ Sutter St. (from Sansome to Stockton) and Post St. (from Taylor to



Legend

- ② ⑤ Municipal Railway Routes
- ← One-Way Street Direction
- * Major Thoroughfares
- ** Transit Arterial Streets
- Montgomery St. Subway Station

FIGURE 21:
Municipal Railway Routes and
Traffic Circulation in Project
Vicinity

SOURCE: Wilbur Smith & Associates

Montgomery) are included in the Transit Preferential Streets Program./3/ A right-side transit lane has been designated on Sutter St., from Sansome to Stockton Sts. and on Post St., from Taylor St. to mid-block Grant St. A left-side transit lane designated on Post St., from Kearny St. to Montgomery St. at the approach to the Post - Montgomery - Market intersection, provides turning room for buses entering Market St./4,5/

The site is within the Downtown Core automobile control area designated in the Downtown Transportation Plan of the San Francisco Comprehensive Plan. This area is described in the Plan as "that intensely populated area which functions as a financial, administrative, shopping and entertainment center where priority must be given to the efficient and pleasant movement of business clients, shoppers and visitors; where a continuing effort should be made to improve pedestrian, transit and service vehicle access and circulation; where priority for the use of limited street and parking space within this core should be available for these functions; and where a continuing effort should be made to reduce the impact of the private commuter vehicle."/6/

The nearest freeway access from the site to the James Lick-Bayshore Freeway (Highway 101) and the San Francisco-Oakland Bay Bridge (Interstate 80) is a pair of ramps on Mission St. at Main and Beale Sts., about six blocks (3,000 ft.) east of the project site. Freeway ramps at Clay and Washington Sts., five blocks northeast of the site, provide access to the Embarcadero Freeway; ramps at Harrison-Bryant Sts., eight blocks south of the site, provide access to the Bay Bridge and the Bayshore Freeway. The Battery-Sansome Sts. one-way pair and Broadway are routes to the Golden Gate Bridge, via North Point or Lombard Sts.

Peak-hour traffic counts at Sutter and Montgomery and at Kearny and Post Sts. indicate that the two intersections operate at Level of Service A./7/ (See Appendix D, Table D-5, p. 205 for definitions of Level of Service). While these two intersections experience heavy traffic volumes, they generally function with little or no delay and near free-flow conditions because the one-way street patterns minimize vehicular turning movement conflicts. The Sutter and Kearny Sts. intersection operates at Level of Service B. It

experiences short delays due to occasional conflicts between pedestrians violating traffic signals, vehicles turning right onto Kearny from Sutter, and vehicles turning left onto Sutter from Kearny.

TRANSIT SERVICE

The site is served by regional and local transit carriers. Regional service is available via the Bay Area Rapid Transit District (BART), AC Transit, San Mateo County Transit District (SamTrans), Greyhound, Caltrans Peninsula trains (operated by Southern Pacific Railroad), and the Golden Gate Bridge, Highway and Transportation District (Golden Gate Transit). Local service is provided by the San Francisco Municipal Railway (Muni), supplemented by Mission St. jitneys (independently operated and licensed by the City).

Muni operates 43 weekday transit lines serving the Financial District, 42 of which are within 2,000 ft. of the project site (see Figure 21, p. 56). Five of these lines operate in the Muni Metro Market Street subway (accessible from the site at the Montgomery St. Station, about 1,000 ft. southeast of the site); the remaining are local, limited and express surface lines. The local, limited and 17X-Parkmerced and 30X express lines operate throughout the day; other express lines operate only in peak-hour, peak direction./8/ The 2-Clement, 3-Jackson, 4-Sutter and 45-Greenwich lines run westbound on Sutter St., with a stop at Sutter and Kearny along the project frontage. The 30-Stockton turns west on Sutter at Kearny and stops on Sutter west of the site. The 15-Third runs north on Kearny St. with a stop on Kearny St. south of the site.

Regional service to the East Bay is provided by the Bay Area Rapid Transit District (BART) from the Montgomery St. Station, and by AC Transit buses from the Transbay Transit Terminal on Mission and First Sts. (2,500 ft. east of the site). Service to the Peninsula is provided by Caltrans Peninsula trains from a terminal at Fourth and Townsend Sts.; by SamTrans, with bus routes and stops along various downtown streets, primarily on Mission St. west of First St.; and by BART, by transfer to SamTrans routes at the Daly City BART Station.

Golden Gate Transit provides peak-period bus service to Marin and Sonoma Counties from stops on Battery (inbound) and Sansome (outbound) Sts., from the Transbay Transit Terminal, and from stops along Howard and Folsom Sts. Golden Gate Transit also provides ferry service to Larkspur and Sausalito from the Ferry Building, about seven blocks northeast of the site.

Although not traditionally considered transit, car pooling or ridesharing is becoming an increasingly popular form of commuter travel. Golden Gate Transit operates a van pooling program to North Bay areas not served by motor coach routes. The RIDES car pooling program, operated by a non-profit, publicly funded corporation, provides consulting and matching services to help establish Bay Area car and van pools.

PARKING AND LOADING SPACE AVAILABILITY

Within a walking distance of about 2,000 ft. from the site are approximately 17,300 off-street public parking spaces./9/ Six lots or garages with a total of about 1,170 spaces would be removed by projects presently under formal review. When the accumulation of parked vehicles in the garages in the project vicinity reaches its peak at late morning or early afternoon, only about 650 spaces (4%) are vacant in the entire area. Vacant spaces are not immediately found and filled by drivers seeking to park, so there is a de facto vacancy rate of a few percent, regardless of the extent to which parking demand exceeds the supply.

Street curbs in the project vicinity are striped or posted for commercial loading (yellow zones), including metered and unmetered zones; no stopping or parking any time (red zones); limited stop (white zones); or are covered by construction canopies for sidewalks displaced by projects under construction. (See Section IV., Environmental Impact, Figure 29, p. 105).

Kearny St. fronting the site is a red zone; Sutter St. is a red zone with a bus stop, and Hardie Place is posted no parking any time. Hardie Place provides service access to a restaurant (Orsi) fronting Bush St., and to the Hallidie Building (130 Sutter St.) loading dock.

PEDESTRIAN AND BICYCLE ACTIVITY

Pedestrian flows on the Sutter and Kearny Sts. sidewalks currently are within the impeded range during the noon and afternoon peak periods. (See Appendix D, Table D-4, p. 203 for pedestrian flow descriptions.) The signals at Montgomery and Sutter Sts. provide an exclusive pedestrian phase for all directions, including diagonal directions. Pedestrian violations of this signal were observed during the noon and evening peak periods, resulting in delays for traffic turning right onto Sutter from Montgomery St.

The Transit Preferential Streets program recommends a "late release" pedestrian signal for Sutter St., on the west side of Kearny St./8/ Such a signal would include a phase allowing vehicle left-turn movements from northbound Kearny St. before the pedestrian signal allowed movement across Sutter St.

No bicycle routes are designated in the vicinity of the project site. Market St. has been designated in the Transportation Element of the San Francisco Comprehensive Plan as one of the streets to be improved as a bicycle route./10/

NOTES - Transportation, Circulation and Parking

/1/ A major thoroughfare is cross-town link whose primary function is to link districts within the City and to distribute traffic from and to the freeways; a route generally of citywide significance.

/2/ A transit arterial street is defined as a route of major transit lines.

/3/ Wilbur Smith and Associates, Transit Preferential Streets Program, November 1981, pp. 36-38.

/4/ Wilbur Smith and Associates, Transit Preferential Streets Program, November 1981, pp. 40-44.

/5/ Glenn Erickson, transportation planner, Department of City Planning, telephone conversation, November 10, 1982.

/6/ San Francisco City Planning Commission, Resolution 6834, April 27, 1972, Comprehensive Plan, Transportation Element, p. 25.

/7/ Sutter and Montgomery intersection counts: Wednesday, March 10, 1982, 4:30-5:30 p.m.; Kearny and Post intersection counts: Tuesday, March 9, 1982, 4:30-5:30 p.m.; Sutter and Kearny intersection counts: Tuesday, March 9, 1982, 4:45-5:45 p.m. by Wilbur Smith and Associates.

/8/ Wilbur Smith and Associates, Transit Preferential Streets Program, November 1981, p. 41.

/9/ The parking inventory survey was conducted on November 5, 6, 7, 10, 13 and 17, 1980, and January 20-23 and 26, 1981 (all weekdays) between the hours of 10:00 a.m. to noon and 1:00 to 3:00 p.m. The study area is bounded by Howard, Fourth, Ellis, Powell, Geary, Mason, Sacramento, Powell, Clay, Stockton, Washington, Grant, Jackson, Sansome, Washington, Davis, California, Drumm, Market, Beale, Mission, and Fremont Sts (see Figure D-8, p. 212). The study was conducted after the start of excavation for the George R. Moscone Convention Center (August 10, 1978) and construction for Crocker Plaza and the associated respective loss of all parking spaces in the Third-Fourth-Howard-Folsom Sts. Block and some in the block to its north, and the loss of parking in the Montgomery-Post-Kearny-Sutter Sts. block. The information was updated and revised in July and August 1982 by Environmental Science Associates, Inc.

/10/ San Francisco City Planning Commission, Resolution 6834, April 27, 1972, Comprehensive Plan, Transportation Element, p. 27.

F. AIR QUALITY

San Francisco's air quality, in general, is the least degraded of all the developed portions of the Bay Area. Because of the prevailing westerly and southwesterly winds, San Francisco is more a generator of its own air quality problems, especially carbon monoxide (CO) and total suspended particulates (TSP) and a contributor to those problems in other parts of the Bay Area (especially ozone), than a recipient of pollutants from elsewhere.

The Bay Area Air Quality Management District (BAAQMD) operates an air quality monitoring station about 2.5 miles south of the site at 900 23rd St. A three-year summary of the data collected, and the corresponding ambient air quality standards, are shown in Appendix F, p. 215. These data show occasional excesses of the most stringent ozone (O_3), CO, TSP, and nitrogen dioxide NO_x standards. In 1978, the one hour standard for O_3 was exceeded once, the one hour standard for NO_x was exceeded four times, and the 24-hour standard for TSP was exceeded once. In 1979, the eight-hour standard for CO

was exceeded twice and the 24-hour TSP standard exceeded once. (A more stringent one-hour CO standard went into effect January 1, 1983.) The only air pollutant to exceed standards in 1980 was TSP; the 24-hour standard was exceeded six times.

Highest annual pollutant concentrations in San Francisco, while exhibiting fluctuations due to variations in meteorology, have shown an overall improvement during the 1971-1980 period. No similar trend in the annual number of violations of standards is evident, although such occurrences are infrequent (six a year or less).

Emissions from motor vehicles are the largest source of CO, hydrocarbons (HC), and NO_x in San Francisco, while vehicle emissions and power plant fuel combustion are the largest sources of TSP and sulfur oxides (SO_x), respectively./1/

The nine-county San Francisco Bay air basin is designated by the California Air Resources Board (ARB) as a nonattainment area for O₃ and CO. San Francisco is also a nonattainment area for TSP. (Nonattainment means the federal ambient air quality standards for these pollutants have been violated within the past two to three years.) As required by the federal Clean Air Act Amendments of 1977, a regional Air Quality Plan has been adopted that establishes control strategies (stationary and mobile source emission controls and transportation improvements) to attain Federal and State standards for these pollutants by 1987./2/ The BAAQMD, Metropolitan Transportation Commission (MTC), and ARB have primary responsibility for implementation of these strategies.

NOTES - Air Quality

/1/ California Air Resources Board (ARB), 1979, Emission Inventory 1976.

/2/ Association of Bay Area Governments (ABAG), BAAQMD, MTC, 1982, 1982 Bay Area Air Quality Plan, San Francisco Bay Area Environmental Management Plan.

IV. ENVIRONMENTAL IMPACT

An application for environmental evaluation for the project was filed in December 1981. It was determined that an Environmental Impact Report (EIR) was required on April 30, 1982, based on an Initial Study. Issues that were determined to require no further discussion as a result of the Initial Study include noise during project operation; air quality during construction; public services and utilities; biology; topography, soils, geology and hydrology; hazards; and sub-surface cultural resources; therefore, this Draft EIR does not discuss these issues. (See Appendix A, pp. 160-184, for the Initial Study.)

Some of the impacts presented in this section are not physical environmental effects as defined by the California Environmental Quality Act. They are included in the EIR for informational purposes only.

A. LAND USE AND ZONING

LAND USE

The project site is part of the transition area, from the office uses of the Financial District to the mixed uses including retail, office, hotel and entertainment, west of Kearny St. The Sutter St. frontage of the project block is primarily ground floor retail with a mix of office and retail uses on the upper floors of the buildings. The Kearny St. frontage of the project block is part of a four-block stretch between Market and Pine Sts. where small-scale buildings contain ground floor retail and a mix of office and retail uses on the upper floors and serve downtown workers and residents. There are three hotels on Kearny St. within two blocks of the project site.

The project would be similar to existing and proposed office uses in the vicinity, including the Bank of America headquarters at Pine and Kearny Sts., and the Crocker Bank headquarters at the northeast corner of Kearny and Post Sts. Approved projects include the San Francisco Federal Savings and

IV. Environmental Impact

Loan headquarters at the southeast corner of Kearny and Post Sts, the 38-story office-retail-residential tower at 333 Bush St. (on the north side of the project block), the 23-story 580 California building at Kearny St., and an office building with ground floor retail use at 466 Bush St., near Grant. North of the site, proposed projects include a 26-story office tower with ground floor retail at the northwest corner of Pine and Kearny Sts., and the Russ Tower project at 350 Bush St. A five-story addition to the 550 Kearny St. building is nearing completion, as is a 28-story office tower with ground floor retail uses, 101 Montgomery St. on the east side of the project block. On Sutter St., one-half block west of the site, the W. & J. Sloane Building is being converted from retail to office and retail use.

The project, and other office buildings under construction and proposed along this western border of the C-3-0 Financial District, would contrast with the mixed-use (office, retail, hotel) portion of Kearny St. and with the C-3-R Retail District to the west. The character of this portion of Kearny St. would be expected to change as a result of the cumulative development effects of these buildings.

Useable retail space at the site would be reduced by about 8,400 sq. ft., from approximately 18,400 sq. ft. to 10,000 sq. ft. Six retail establishments would be displaced; the type and number of the new retail tenants has not been determined. (Section IV.D., Employment, Housing and Fiscal Factors, p. 85, discusses specific relocation information for tenants on the site). Office use would be increased by about 204,000 sq. ft. from 67,000 sq. ft. to 271,000 sq. ft.

SAN FRANCISCO COMPREHENSIVE PLAN

Objective 3 of the Commerce and Industry Element of the Comprehensive Plan of San Francisco states: "Maintain and improve San Francisco's position as a prime location for financial, administrative, corporate, and professional activity." Under this objective, Policies 1 and 2 state: 1) "Encourage continued growth of prime downtown office activities so long as undesirable consequences of such growth can be avoided." and 2) "Guide location of office development to maintain a compact downtown core so as to

minimize displacement of other viable uses."

New office development under construction, approved or proposed, including projects within two blocks of the project site, would be consistent with maintaining and improving San Francisco's position as a prime location of financial and related activities and the objective of maintaining a compact downtown core. Existing small-scale retail and office uses on Kearny St. and Sutter St. would be replaced by the project's large-scale office development with retail uses. This displacement of small-scale uses could conflict with the objective of minimizing "displacement of other viable uses."

The relationship of the project to the Urban Design Element of the Comprehensive Plan is discussed in Table 4, Section IV.C., Urban Design, Wind and Shadow (pp. 70-72.)

ZONING

The project is in the C-3-0 (Downtown Office) District (see Figure 12, p. 33). This district plays a "leading national role in providing high quality office development for finance, corporate headquarters and service industries, and serves as an employment center for the region" and "the intensity of building development is the greatest in the City, resulting in a notable skyline symbolizing the area's strength and vitality" (Section 210.3 of the Planning Code). The project would provide increased office space at the site, a use which would be compatible with the description and purpose of the district.

The site's location at the western edge of the Downtown Office District adjoins the C-3-R (Downtown Retail) and the C-3-G (Downtown General Commercial) Use Districts (see Figure 12, p. 33). The Downtown Retail District is "a regional center for comparison shopper retailing and direct consumer services. It covers a "compact area with a distinctive urban character," and "consists of uses with cumulative customer attraction and compatibility..." (Section 210.3). The General Commercial District is "composed of a variety of uses: retail, offices, hotels, entertainment, clubs and institutions, and high density residential...The intensity of development is lower here than in the downtown core area" (Section 210.3).

The project would comply with the limits of 500-I Height and Bulk Districts for the site. The proposed building height of 315 ft. would be 185 ft. lower than the maximum permitted height of 500 ft. The maximum building length of 138 ft. (above the height of 150 ft.) would be 32 ft. less than the maximum permitted length of 170 ft., and the maximum diagonal dimension of 188 ft. (above the height of 150 ft.) would be 12 ft. less than the maximum permitted 200 ft.

The basic permitted floor area ratio (FAR) of 14:1 would allow development of 280,910 gross sq. ft. of building area on the proposed building site. The project floor area would be 280,910 sq. ft., the maximum permitted (see Table 1, p. 17).

GUIDING DOWNTOWN DEVELOPMENT

In July 1982, the Department of City Planning published Guiding Downtown Development (GDD), (revised from the May 1981 GDD) a report containing regulatory proposals for development in downtown San Francisco. (See Section VII., Alternatives, p. 143, for a project alternative conforming to the recommendations contained in GDD.) The relationship of the project to the major proposals of GDD is discussed below. GDD recommends that Kearny St. frontages between Pine and Market Sts., including the project site, be redesignated from the C-3-0 (Downtown Office) to the C-3-R (Downtown Retail) use district; the base FAR for the C-3-R district would thus be changed from 14:1 to 6:1, with a maximum additional FAR of 3:1 allowable for residential uses. (This housing allowance would not be permitted on sites of listed historically or architecturally significant buildings.) The gross office floor area of the project would exceed the GDD-recommended FAR of 6:1 by 8:1, or about 168,000 sq. ft. The height limit for the site would be changed from 500 ft. to 120 ft. under GDD proposals.

GDD proposes a FAR bonus, through transfer of development rights from one site to another, of up to 50 percent of the private floor area of a restored building, for restoration of significant structures. The project could qualify for a bonus of up to 40,000 sq. ft. for restoration of the 200 Kearny St. and 154 Sutter St. buildings under this proposed provision. Public works of art, valued at one percent of construction costs, are recommended in GDD.

Art work would be exhibited as part of the building lobby or terraces of the project.

GDD-recommended policies would require that one square foot of public open space, recreation or cultural facility be provided for every 40 sq. ft. of gross building floor area in the C-3-R district. If applied to the project, this would be about 7,000 sq. ft.. The 9,800 sq. ft. roof-top terraces would exceed this requirement. The project would include 10,000 sq. ft. of ground-floor retail space, encouraged by GDD.

GDD would control building dimensions, floor sizes and bulk through application of a Bulk Control Zone Chart and Upper Tower Floor Area Chart. Essentially, these would require setbacks, smaller floor sizes and slimmer profiles as building height increased. For a 120-ft. building on the project site, the proposed controls would allow development up to the lot lines. At 315 ft., the project would exceed the proposed 120-ft. GDD height limit for the site by 195 ft.

GDD recommends that Hardie Place be designated a Commercial Recreation Street. Such streets would be developed with pedestrian-oriented retail uses and design controls to maintain or enhance a sunlit environment. The project would not have retail frontage on Hardie Place; the alley would provide loading and packing access to the project (as it now does for the Hallidie Building). Project sunlight and shadow effects on Hardie Place are discussed on pp. 81-84.

GDD recommends that 640 sq. ft. of housing be constructed for each 1,000 sq. ft. of office space, or about 180,000 sq. ft. for the project, based on project-generated residential demand. The project sponsor would provide this housing off-site. (See Section V., Mitigation Measures, p. 130.)

B. ARCHITECTURAL RESOURCES

The project would restore and preserve the street facades of the Adams Building at 200 Kearny St. and the Central Realty Building at 154 Sutter St. The mezzanine glazing and corner canopy would be reconstructed, based on the

original plans of the Adams Building; the Central Realty Building cornice would be reproduced, based on original plans. The interiors of these structures would be replaced to meet present seismic safety and building code requirements and to integrate office space in the project as a whole. The floor and window levels of both buildings would be maintained. The project would, thus, partially demolish, replace the interiors, and restore and preserve the Sutter and Kearny St. facades of these buildings which are included on the City's List of Architecturally and/or Historically Significant Buildings in the Downtown. The Adams building is rated "A" and the Central Realty Building is rated "B" by Heritage. The two buildings are also included in the Heritage-proposed Retail Historic District (see Appendix B-2, p. 187), and the Hallidie Building Block - Retail Historic District, an historic district recommended for approval by the Landmarks Preservation Board in Resolution No. 257, October 6, 1982. If the district were established prior to approval of the project, the project would require a Certificate of Appropriateness for alterations to the exteriors of the 154 Sutter St. and 200 Kearny St. buildings, pursuant to Section 1006 of the City Planning Code.

The Robins Building at 220 Kearny St. would be demolished. This building is not on the City's list of architecturally significant buildings; it is rated "C", for contextual importance in the Kearny St. area, in the Heritage survey, and is included in the Heritage-proposed Kearny St. Historic District. (See Appendix B-2, p. 187.)

The project would restore and preserve the 200 Kearny and 154 Sutter street facades, preserving the architectural context of the Sutter St. setting of medium-scale, post-Earthquake commercial structures on this block, called "...one of the finest and most important ensembles of early twentieth-century architecture in downtown San Francisco and in the western United States..."^{1/} The project tower would introduce a large-scale building which would contrast with the design of buildings on this north frontage of Sutter St. between Montgomery and Kearny Sts. The project tower would be 315 ft. tall, compared to the 405-ft. 101 Montgomery St. tower under construction at Montgomery and Sutter Sts. The project tower would be set back about 35 ft. from the Sutter St. frontage.

Projects under construction, approved or proposed in the site vicinity would affect structures on the City's list of architecturally significant buildings. The 101 Montgomery St. Building is restoring and incorporating the California Pacific Building at Montgomery and Sutter Sts. for use as office space. (Original floor levels in the old building are being changed to match those of the new tower.) The Citicorp project under construction at One Sansome St. (at Sutter) is retaining a portion of the exterior walls of the Anglo-California Bank building as an entrance court for the office tower. The approved San Francisco Federal Savings and Loan headquarters project, at Post and Kearny Sts., is demolishing the Maskey Building on Kearny St. A portion of the Maskey Building facade will be incorporated on the Kearny St. frontage of that project. The approved 466 Bush St. project will restore Fire Station No. 2, a designated City landmark, for retail use. The approved 333 Bush St. building will demolish the "B"-rated Financial Center Garage.

NOTE - Architectural Resources

/1/ Foundation for San Francisco's Architectural Heritage, Splendid Survivors, California Living Books, 1979, p. 249.

C. URBAN DESIGN, WIND AND SHADOW

URBAN DESIGN

Relationship of the Project to the Comprehensive Plan

The Urban Design Element of the San Francisco Comprehensive Plan contains policies and principles intended to serve as guidelines for new development. The policies contained in the Plan are used as the basis for the evaluation of the proposed project with respect to its urban design effects. The relationships between applicable urban design policies and the proposed project are summarized in Table 4, pp. 70-72.

TABLE 4: RELATIONSHIP BETWEEN PROPOSED PROJECT AND APPLICABLE URBAN DESIGN POLICIES OF THE SAN FRANCISCO COMPREHENSIVE PLAN

<u>APPLICABLE URBAN DESIGN POLICIES</u>	<u>RELATIONSHIP OF THE PROPOSED PROJECT TO THE POLICIES</u>
A. <u>Policies for City Pattern</u>	
1. Policy 1: "Recognize and protect major views in the City, with particular attention to those of open spaces and water." (p.10)	The project would not interrupt views towards the Bay, which are presently blocked at the foot of Sutter St. by intervening buildings, nor would it block views of any existing open space. The project would interrupt some views to the south and southwest from the approved 333 Bush Bldg, the Russ Building and the Bank of America building. Existing short-range views of the upper floors of the Hunter-Dulin Bldg. from the west would be blocked.
2. Policy 2: "Recognize, protect and reinforce the existing street pattern, especially as it is related to topography." (p. 10)	The project would be built out to the property line, maintaining the continuous street facade along Sutter and Kearny St. Retail establishments would be maintained along Sutter and part of the Kearny frontage.
3. Policy 3: "Recognize that buildings, when seen together, produce a total effect that characterizes the City and its districts." (p. 10)	The project would add to other high-rise structures which form the skyline image of the Financial District and contribute to the visual identity of the central business district.
4. Policy 6: "Make centers of activity more prominent through design of street features and by other means." (p. 12)	The project would include landscaped open space areas with southern exposure at the roof levels of the 200 Kearny and 154 Sutter buildings. Retail uses would be continued at street level.

TABLE 4: RELATIONSHIP BETWEEN PROPOSED PROJECT AND APPLICABLE URBAN DESIGN POLICIES OF THE SAN FRANCISCO COMPREHENSIVE PLAN (Continued)

B. Policies for Conservation

- | | |
|---|--|
| <p>5. Policy 4: "Preserve notable landmarks and areas of historic, architectural or aesthetic value, promote the preservation of other buildings and features that provide continuity with past development." (p. 25)</p> | <p>The project would require demolition of 220 Kearny St., rated "C" in the Heritage Survey. The facades of 200 Kearny St. (rated "A") and of 154 Sutter St. (rated "B") would be restored; their interiors would be replaced. Mezzanine glazing and the corner canopy of 200 Kearny would be restored; the cornice of 154 Sutter would be reproduced.</p> |
| <p>6. Policy 6: "Respect the character of older development nearby in the design of new buildings." (p. 25)</p> | <p>See Item 5 above. The project tower would be larger in scale and of different materials than adjacent older development on Sutter and Kearny Sts. The tower setback from the facade of the project base and other low-rise buildings on Sutter St. is intended to provide a transition between the new construction and the older buildings on Sutter St. The project would maintain facades that define the street space on Kearny and Sutter. By restoring and maintaining the existing retail entrances of 200 Kearny and 154 Sutter Sts., and retaining the existing floor levels of 200 Kearny, the project would be consistent with existing, nearby older development.</p> |

C. Policies for Major New Development

- | | |
|--|--|
| <p>7. Policy 1: "Promote harmony in the visual relationships and transitions between new and older buildings." (p. 36)</p> | <p>The project would maintain the continuous street-level facade created by existing older development and storefront windows. The open space areas at the roof levels of 200 Kearny St. and 154 Sutter St. would visually separate the project tower and set it back from the restored facades on Sutter St.; this is intended to emphasize the unity of the street frontage. The west side of the project tower would be a new</p> |
|--|--|

TABLE 4: RELATIONSHIP BETWEEN PROPOSED PROJECT AND APPLICABLE URBAN DESIGN POLICIES OF THE SAN FRANCISCO COMPREHENSIVE PLAN (Continued)

	high-rise element on the Kearny St. frontage of the project block that would contrast with lower-scale, older buildings.
8. Policy 2: "Avoid extreme contrasts in color, shape and other characteristics which will cause new buildings to stand out in excess of their public importance."	The project tower would be generally rectangular in form, with curved facade elements above the rooftop terraces and the 17th floor. Light colored surface materials and non-reflective glass would be used.
9. Policy 4: "Promote building forms that will respect and improve the integrity of open spaces and other public areas." (p.36)	See Item 1 above. The project would not shade any existing public park or plaza. The tower bulk would be less than the maximum permitted, and would block less sunlight than would an alternate project of maximum allowable horizontal dimensions. The project would include 9,800 sq. ft. of publicly accessible plaza area.
10. Policy 5: "Relate the height of buildings to important attributes of the City pattern and to the height and character of existing development." (p. 36)	The project would be taller than nearby older buildings, and 185 ft. less than the maximum height permitted. The project would be shorter than high-rise development under construction and approved on the project block.
11. Policy 6: "Relate the bulk of buildings to the prevailing scale of development to avoid an overwhelming or dominating appearance in new construction." (p. 37)	See Items 6 and 10 above. The overall size and location of the tower would contrast with the scale of existing development on Sutter St., and with the lower-scale retail district to the west.

SOURCE: Environmental Science Associates, Inc.

Visual Quality

The project base element and tower would be visible at street level along Sutter St. from Stockton to Sansome Sts., and along Kearny St. from Market to Pine Sts. Beyond these points, intervening buildings would reduce or eliminate views of the project. The tower would be visible from the intersection of Montgomery and Market Sts. (after removal of the upper levels of the older Crocker Bank building at One Montgomery St. as part of the Crocker Center project). The 315-ft. project tower would contrast with low- to medium-scale buildings in the Kearny/Sutter Sts. area (see Figures 22, 23, 24, pp. 74 - 76). From Sutter St. west of the site, the project would appear as a tower set back above a base of older structures with high-rise buildings in the background, including the 101 Montgomery St. project and the approved 333 Bush St. building. (See Figure 22, p. 74.) From Sutter St. east of the site, the project tower would be visible above low- to mid-rise development (see Figure 24, p. 76). From Kearny St. south of the site, the tower would be seen above the Sutter Hotel at the southeast corner of Sutter and Kearny Sts. Further south on Kearny St., views of the site would be partially obstructed by the Crocker Tower. From north of the site on Kearny, views of the lower portions of the project would be partially blocked by existing buildings (see Figure 23, p. 75). The 19-story tower would be shorter than other recently-built, under construction and proposed high-rise buildings in the immediate area of Kearny/Sutter/Montgomery Sts., including the 38-story Crocker Tower, the 28-story 101 Montgomery St. building, and the approved 38-story 333 Bush St. building.

Incorporation of the restored 200 Kearny St. and 154 Sutter St. facades into the project design would maintain the existing scale of Sutter St. at the street facade. The 35-ft. setback of the project tower and the separation of the tower above the rooftop terraces are intended visually to separate the tower from the base, and from the other low-rise buildings on the Sutter St. frontage of the project block. The project tower would change the transition in building heights along the north frontage of Sutter St., which now includes the 12-story California Pacific building at the east end of the block, the 10-story French Bank building (108-110 Sutter St.), the six-story 154 Sutter St., and five-story 200 Kearny St. buildings on the project site.



FIGURE 22:
Photomontage of Project Looking East
on Sutter Street Near Kearny Street

SOURCE: Peter Bosselman



FIGURE 23:
Photomontage of Project Looking South
on Kearny Street near Bush Street

SOURCE: Peter Bosselman



SOURCE: Peter Bosselman

FIGURE 24:
Photomontage of Project Looking West
on Sutter Street at Montgomery Street

IV. Environmental Impact

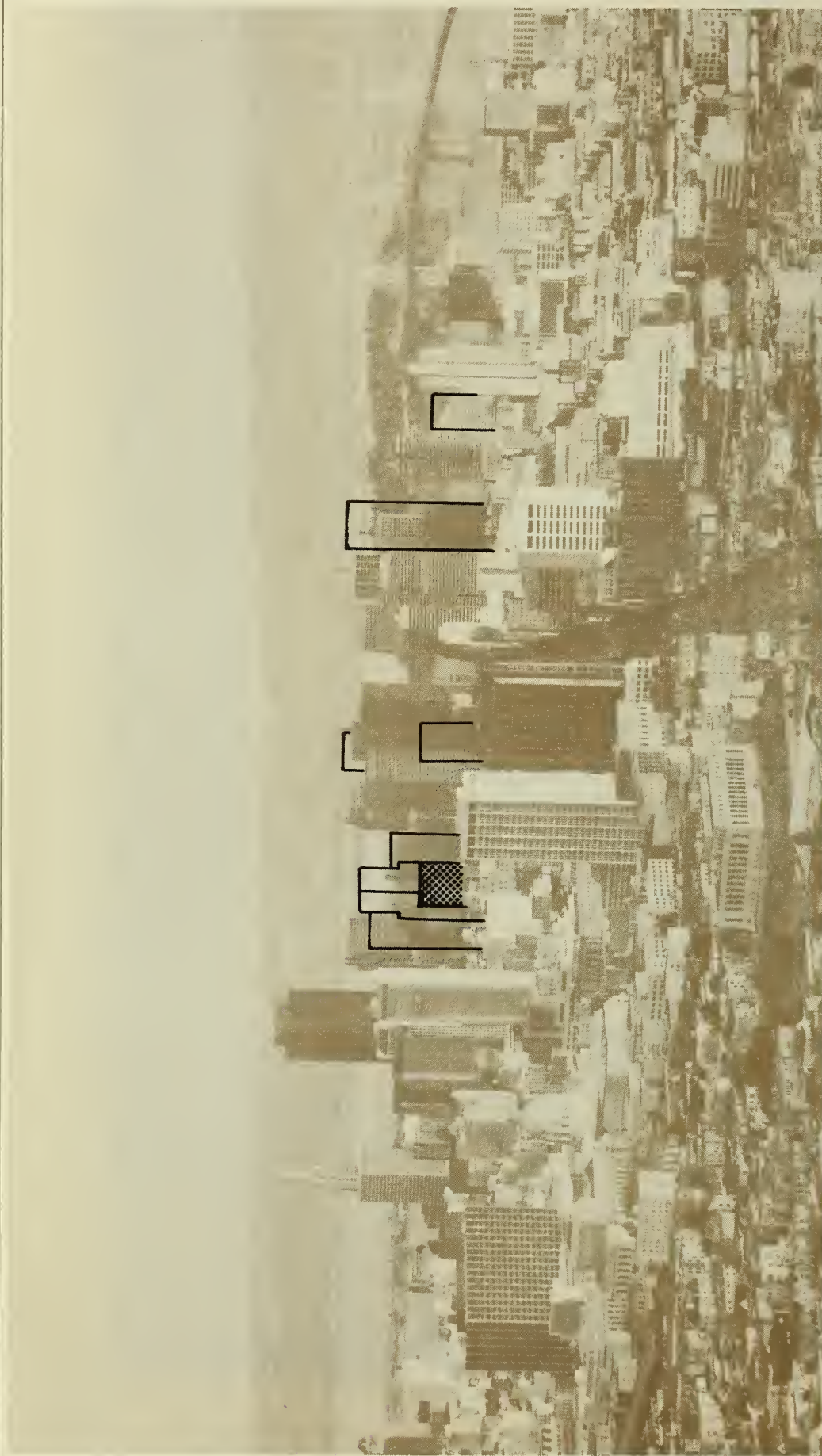
The project would be visible from long-range viewpoints, such as Potrero Hill to the south, Nob Hill to the northwest and Twin Peaks to the southwest, as part of clusters of high-rise structures in the Financial District (see Figure 25, p. 78).

The project would not obstruct any major scenic public views or vistas. Views from the upper floors of the Hotel Stanford looking south, and the Sutter Hotel and Crocker Tower (below the 19th floor) looking north would be blocked by the proposed project. Views northwest from the Hunter-Dulin Building across Sutter St. would be partly obstructed (below the 19th floor) by the project and by the approved 333 Bush St. project. Narrow view corridors to the northwest and north from the Hunter-Dulin Building would remain between the project, 333 Bush St., and the 101 Montgomery St. building. Views southwest from 101 Montgomery St. and 333 Bush St. would be partly obstructed by the project, below the 19th floor.

WIND/1/

Wind speeds at pedestrian level can be predicted by multiplying the "freestream wind speed" (wind speed measured above the wakes of the surrounding buildings)/2/ by the "wind speed ratio" (ratio of surface to freestream winds, determined from wind tunnel tests)./3/ It should be noted that wind speed ratios are not actual wind speeds. A point having a "very high" wind speed ratio could still experience light winds when the freestream wind speed is low (a near-calm day). Likewise, a point found to have a "low" wind speed ratio could experience strong winds when the freestream wind speed is high. For San Francisco, the commonly used definitions of pedestrian-level wind speed ratio ranges are as follows:

<u>Relative Intensity of Surface Winds</u>	<u>Ratio of Pedestrian Level Wind Speed to Freestream Wind Speed</u>
Low	0.00 - 0.19
Moderately Low	0.20 - 0.29
Moderate	0.30 - 0.49
Moderately High	0.50 - 0.69
High	0.70 - 1.00
Very High	Greater than 1.00



**STRUCTURES PROPOSED
OR UNDER CONSTRUCTION**

Ruse Tower PROJECT One Sansome St. 5 Fremont Center
 101 Montgomery St. 136 Main St.
 333 Bush St. S.F. Federal Savings

**EXISTING
STRUCTURES**

Bank of America
 Transamerica Pyramid Crocker Bank Headquarters

SOURCE: Environmental Science Associates, Inc.

FIGURE 25: View of the Project from Twin Peaks

Using a scale model of the site and vicinity, the wind tunnel study included separate tests simulating west, southwest, and northwest winds under existing conditions, and with the proposed project in place. All other projects now under construction, approved for construction, or undergoing environmental review (as of April 1982) were included in the scale model. Appendix E, pp. 213-214, includes a table indicating locations of wind speed measurements, recorded wind speed ratios on the model, and buildings included as part of cumulative development. The wind tunnel data in the appendix are based on an earlier design of the project. In the opinion of the wind study consultant, the effects of the project would be similar to the design tested./4/

West Winds

West winds are the most frequent and the strongest winds in San Francisco on an annual basis. Upon project completion, during west wind conditions pedestrians at the Bush St./Trinity St. intersection would experience an increase in wind speed ratios from moderately low to moderate. Wind speed ratios along the Sutter St. frontage of the project and on the proposed west rooftop terrace (the present roof of 200 Kearny St.) would increase from low to moderately low.

Southwest Winds

Southwest winds are typically the second most frequent and second strongest winds. The project would increase wind speed ratios from moderately low to moderate along the Sutter St. frontage and at the Sutter St./Trinity St. intersection. Wind speed ratios on Hardie Place and at the Kearny St./Hardie Place intersection would increase from low to moderately low, while wind speed ratios would decrease from moderately low to low at the west side of the Sutter St./Kearny St. intersection and on the proposed west rooftop terrace. Ratios at the east side of the intersection would remain moderately low. Wind speed ratios would increase from moderately low to moderate at the intersection of Sutter and Montgomery Sts./5/

Northwest Winds

On an annual basis, northwest winds are generally the least frequent of the three predominant winds, with lower average speeds. Upon project completion, pedestrians would experience an increase from low to moderately low wind speed intensity at the Sutter St./Kearny St. intersection and along the Kearny St. frontage of the project site during northwesterly wind conditions. The east rooftop terrace (the present roof of 154 Sutter St.) would experience an increase from moderately low to moderate wind speed ratios.

Summary

Pedestrian discomfort begins to be felt at wind speeds of about 12 mph./6/ Pedestrian discomfort from the project would not occur frequently in the project vicinity because freestream upper-level wind speeds of at least 32 mph for west winds and 34 mph for southwest winds would be required for street-level winds to reach 12 mph at all street-level points measured in the study, including the Sutter-Kearny intersection. West winds would need to reach 38 miles per hour or greater, for winds to reach 12 miles per hour on the west rooftop terrace. Wind speeds greater than 25 mph occur seven percent and five percent of the time for westerly and southwesterly winds, respectively. For northwesterly winds, free-stream winds would have to exceed 28 mph to create speeds of 12 mph or greater on the east roof-top terrace. Northwesterly winds greater than 25 mph occur about three percent of the time.

SHADOW

The project, in replacing the three, four- to six-story structures on the site, would create more extended shadow patterns than exist at present. In mid-day hours in spring and fall, the project tower would cast new shadows across the street onto the north sidewalk of Bush St. During mid-day hours in summer, the project would cast new shadows on the northern portion of Hardie Place. Shadow patterns from the project at other seasons and times of day would fall within those cast by existing structures in the vicinity (the Wells Fargo Building at 44 Montgomery St.; the Hunter-Dulin Building at 111 Sutter St.; the Crocker Bank Headquarters, at Kearny and Post Sts., and the 101 Montgomery St. building). The project would shade neighboring streets and

sidewalk areas, as noted above; it would not shade any existing open space or public parks. Figures 26, 27 and 28, pp. 82-84, illustrate affected mid-day shadow patterns in the project area, the worst-case effects. At other times of day, project shadows would completely fall within existing shadows, and the project would create no new shadows. Therefore, shadow patterns for other times of day are not illustrated in this report./7/

During morning hours in winter, the project would shade Kearny St. and its sidewalks north of the site. Project shadows would completely fall within those cast by existing low-rise buildings on Kearny St., the Hunter-Dulin Building and the Wells Fargo Building; thus, no new shadows would be created. During midday, the project would completely shade Hardie Place, as do the existing structures on the site; project shadows on Bush St. sidewalks would overlap those cast by existing structures and by the approved 333 Bush St. building (see Figure 26, p. 82). During mid- to late-afternoon hours, the project and existing buildings would shade Hardie Place, which is shaded under present conditions.

In spring and fall, during morning hours, project shadows on Hardie Place and Kearny St. sidewalks would overlap those cast by existing buildings on or near the site. During midday, the project would completely shade Hardie Place (see Figure 27, p. 83) and in mid- to late-afternoon would partially shade it. The project would cast new mid-day shadows across the street and onto the north sidewalk of Bush St. It would cast no new afternoon shadows on Bush St. or Montgomery St. sidewalks.

During morning hours in summer, the project would cast no new shadows on Kearny and Sutter Sts. and sidewalks west of the site; project shadows would overlap shadows cast by existing site buildings and other high-rise buildings in the area (Crocker Tower, Wells Fargo Building, 101 Montgomery St.). During midday, the project would shade the northern portion of Hardie Place and the windows of the south facade of the Hotel Stanford north of Hardie Place (see Figure 28, p. 84). During mid- to late-afternoon, the project would cast shadows on Sutter St. east of the site and the north side of the intersection of Sutter and Montgomery Sts. These would fall within the shadows cast by 101 Montgomery St.



FIGURE 26:
Projected Shadow Pattern
in Vicinity of Project –
Mid-December
12 Noon Standard Time



LEGEND



Project Site



Existing Shadow



Project Shadow (New Shadow Only)

--- Approved Building Shadow
(333 Bush St.)

SOURCE: Environmental Science Associates, Inc.

FIGURE 27:

**Projected Shadow Pattern
in Vicinity of Project -
Mid-March**

**1 P.M. Standard Time
and Mid-September**

2 P.M. Daylight Saving Time



FIGURE 28:
Projected Shadow Pattern
in Vicinity of Project -
Mid-June
1 P.M. Daylight Saving Time

SOURCE: Environmental Science Associates, Inc.

The project would shade the covered plaza proposed on the west side of 333 Bush in early afternoon hours in spring and fall. Existing buildings on the 222 Kearny St. site would also shade part of the proposed plaza. 333 Bush St. tower shadows would overlap those cast by the project on Bush St. during early afternoon in spring and fall.

NOTES - Urban Design, Wind and Shadow

/1/ This section is based upon a report entitled "Wind-Tunnel Studies of the 222 Kearny Street Building," March 1982, prepared by Bruce R. White, Ph.D., as a subconsultant to Environmental Science Associates, Inc. A copy of this report is on file at the Office of Environmental Review, 450 McAllister St. The methodology of the study is summarized in Appendix E, p. 213.

/2/ In this case, the freestream wind speed is recorded atop the Federal Building at 50 United Nations Plaza, by the U.S. Weather Service.

/3/ The meteorological instruments used for recording the available data on wind speeds and directions were placed so that they measured the freestream wind speeds.

/4/ Dr. Bruce White, letter, November 20, 1982.

/5/ The Montgomery-Sutter measurement point is based on the wind study for the 333 Bush St. EIR, 81.461E (which included the 222 Kearny St. project), pp. 81-85, certified December 16, 1982.

/6/ W. H. Melbourne and P. N. Joubert, 1971, "Problems of Wind Flow at the Base of Tall Buildings," in Proceedings of the Third International Conference of Wind Effects on Buildings and Structures, pp. I-II-2 to I-II-3.

/7/ Shadow diagrams for these times of day are available for public review at the Office of Environmental Review, 450 McAllister St., 5th Floor.

D. EMPLOYMENT, HOUSING AND FISCAL FACTORS

EMPLOYMENT

Tenant Displacement

According to a tenant survey conducted in March 1982, about 500 of the 606 workers on the site are employed by Dean Witter Reynolds./1/ This firm plans to move to the 101 California St. building which is scheduled for completion in 1983. Among the other present tenants, one tenant (the shoe

store) employing six workers may go out of business. All other tenants expressed a desire to relocate in San Francisco, although only Dean Witter Reynolds presently has definite relocation plans. (One firm did not respond to the survey and its relocation plans are not known.)

Project-Related Employment

About 1,150 permanent full-time jobs would result on-site with the project. In the absence of specific information on future tenants, this figure is based on an estimated average sq. ft. per employee by use (see Table 5). The net increase in employment at the site due to the project, after subtracting existing jobs at the site in early 1982, would be about 545. (Office jobs would increase by 551; retail jobs would decrease by 48.)

Bay Area Employment Multiplier Effects

Secondary employment and income would result from permanent project employment because each employed person would generate additional employment by his or her expenditures for goods and services, through the multiplier effect. Assuming that net new office employment at the project were primarily in

TABLE 5: PROJECTED PERMANENT EMPLOYMENT AT PROJECT SITE

<u>Employment Type</u>	<u>Building Space (gross sq. ft.)</u>	<u>Space Per Employee (gross)*</u>	<u>Projected Number of Employees**</u>
Office	270,960	250	(533) 1,084
Retail	10,000	400	(73) 25
Building Maintenance	_____	--	_____ 40
TOTAL	280,960		1,149

* California Office of Planning and Research, Economic Practices Manual, January 1978, pp. 35-37.

** Parenthetical figures are existing on-site employment.

SOURCE: Environmental Science Associates, Inc.; Lincoln Property Co.

finance, insurance, and real estate (the so-called FIRE sector), about 650 additional jobs in other sectors of the Bay Area economy would result./2/

The total number of Bay Area jobs that would be generated by net new employment due to the project would be about 1,195 (545 net project office jobs plus 650 jobs induced by the multiplier). Project construction would require about 260 person-years, an average of about 130 full-time jobs throughout the two-year construction period. About 400 additional person-years of employment would be generated in the Bay Area as a result of the multiplier effect of project construction./2/

Cumulative Downtown Employment

The cumulative context of new office space, of which this project is part, is discussed in Section III., Environmental Setting, p. 48-52, and in Appendix C, Table C-2, pp. 190-192.

The cumulative increase of office space would continue the trend of regional growth in service sector and office headquarters activity and employment. The larger, newer buildings would be occupied primarily by larger tenants and those with the ability to pay higher rents. Because rent levels are lower for older buildings, the space which is vacated by tenants relocating to newer buildings could become available for tenants unable to afford the higher rents for new office space./3/

HOUSING

Cumulative Housing

As indicated in the previous subsection, (p. 86), the project would generate about 1,150 full-time jobs by 1985 (a net increase in downtown office employment of about 545 jobs). To the extent that the project would attract out-of-area employees and contribute to the formation of additional households by existing area residents, it would also contribute to increased local housing demand and a jobs/housing imbalance. (For example, a new job could allow a person entering the job market to leave home and obtain separate housing.)

The relationship between downtown office growth and housing demand in San Francisco was documented in a report prepared by Recht Hausrath and Associates, Economists, that appears as Appendix C, p. 289 through 329, of the 101 Montgomery Street Final EIR, (EE80.355, certified by City Planning Commission Resolution 8941, May 7, 1981). This report is available for public review at the Office of Environmental Review, 450 McAllister Street, 5th floor, and is hereby incorporated by reference into this EIR pursuant to Section 15149 of the California Environmental Quality Act (CEQA) guidelines. In summary, this document states that relatively high wages and employment opportunities attract people to San Francisco, but many people cannot afford the high housing costs in the City. The report estimates the residency patterns of new households that would be attributable to a new high-rise office building and discusses various employment growth assumptions and their housing market implications.

The project would include 270,910 gross sq. ft. of new office space as part of a cumulative total of about 17.3 million gross sq. ft. of net new office space now under construction, approved, or under formal review, based on the total net new gross office space in San Francisco found in Table C-2, p. 192. The project would be about 1.5% of the total new office space.

Applying the assumptions used and explained in the 101 Montgomery Street EIR to cumulative office development, i.e., 15 to 30% of the new employees generated by cumulative office development would be expected to move to San Francisco and the average household would be occupied by 1.4 downtown workers, then between 7,400 and 14,800 new households attributable to new office space development would add to the housing demand in San Francisco by 1990. If the assumptions used in the formula prescribed by the Office Housing Production Program (OHPP) Interim Guidelines of January 1982 are applied i.e., 40% of the new employees attracted to the new jobs created would want to live in San Francisco and the average household would be occupied by 1.8 downtown workers, about 15,400 new households attributable to new office space development would add to the housing demand in San Francisco. Table C-3, p. 193, shows the projected effects of downtown office development on the San Francisco and regional housing markets, excluding employees occupying existing buildings downtown to be demolished on the sites of proposed buildings. These

projections of new households are based on 17.3 million gross sq. ft. of net new office space, including all projects listed in Table C-2, pp. 190-192.

This impact on the housing market would be mitigated to a certain extent because various office developers have committed to provide units, through City Planning Commission final project approval resolutions, or have proposed units on-site./4/

Cumulative office development would increase the City's current high ratio of jobs to housing supply. Housing demand would increase in an already tight housing market, which could be expected to cause prices to increase. Factors independent of office development and outside the control of the City, e.g. immigration, interest rates, State and Federal tax policies, and economic trends, also influence the housing market. Quantification of the effects of cumulative office development on San Francisco housing prices is not possible. The expected new housing demand could be accommodated through additions to the housing stock, increases in the number of office workers per household, and/or displacement of existing residents. Large additions to the San Francisco housing stock are not anticipated in the near future because the housing construction industry has declined nationwide, due to high costs and interest rates. The most easily developable and available sites in the City have already been developed. Census data indicates that the number of people per household has historically been declining. This demographic trend will probably not reverse itself in the next few years due to a variety of factors, including divorce and separation, departure of young adults from families, and the increasing proportion of elderly population. It is possible that gentrification -- the replacement of low-income households by more affluent ones -- could occur./5/

Project Housing Effects

Residency patterns for new employees that would be generated by the project are discussed in the Department of City Planning Office Housing Production Program (OHPP) interim guidelines, January 1982, and by approximate residency patterns of downtown office employees surveyed for five other recent Downtown EIRs (see Appendix C, Table C-3, p. 193). About 40% of project employees are expected to reside in San Francisco, 18% on the Peninsula, 30% in the East

Bay, and 12% in the North Bay. According to the guidelines, the proposed project would generate a gross demand for about 242 units of housing in San Francisco. Net housing demand, calculated by subtracting the demand generated by existing office uses on the site from that which would be generated by the project, would be about 122 units./6/ This calculation is based on the fact that most office workers on-site are Dean Witter Reynolds employees who would move to the 101 California St. building. This employment was accounted for in environmental review of that project. Based on tenant surveys, other office employment on-site would also remain in San Francisco. Another formula, developed by Recht Hausrath & Associates in the 101 Montgomery FEIR, and recognized by the Department of City Planning, projects that between 15% and 30% of the new employees would be expected to move to San Francisco. Based on this formula, the project would generate 80 to 160 San Francisco residents. On the assumption of 1.4 employed persons per household, the project would generate a demand for 60 to 115 housing units./7/ The approximate number of new households to be generated outside of San Francisco as a direct result of the project would be about 75 on the Peninsula, 125 in the East Bay, and 50 in the North Bay. The net amount of housing demand in San Francisco created by the proposed project would be about 1.5% to 2.4% of the City's projected housing growth from 1983 to 1990 (see Appendix C, Table C-3, p. 193).

HOUSING AFFORDABILITY/8/

Downtown Office Growth and Housing Demand

Housing Market Context

The current housing situation in the City arises out of local, regional, and national contexts. While office employment growth plays a role, the housing problems of San Francisco residents are not solely due to office growth. Since the early 1970's, housing prices and rents have increased dramatically in San Francisco and throughout the Bay Area. Demand for housing has been strong and supply has not kept pace with demand in many areas. There are many factors that contributed to this market situation. These include changing lifestyles, changing demographic and household characteristics, rising household incomes, employment growth, the attractiveness of the Bay Area as a

place to live, the availability and cost of financing, the attractiveness of real estate as an investment, limited-growth policies in some Bay Area communities, and the increasing scarcity of land in other communities.

Identification of New Workers

An analysis of housing affordability in relation to downtown office growth would require identification of the group of office workers responsible for the housing impacts of office growth. This is the group of workers newly employed (or retained) in downtown San Francisco who became (or remained) City residents as a result of office growth. These are the individuals employed downtown as a result of office growth who would not otherwise work Downtown. Effects on housing costs attributable to downtown office workers arise because of differences in the City's housing market under the situation with office growth as compared to the situation without it. Differences could occur because greater (or changed) demand for San Francisco housing results in increased (or changed) competition for the City's stock of housing and in rents and prices that would be higher than they otherwise would have been./7/

All new employment in San Francisco attributable to the project would not occur within the project. The new office space provided by the project would primarily accommodate existing firms. Several businesses in existing office space in San Francisco would probably relocate to the project. Office space vacated by these firms would eventually be occupied by other firms, which in turn would leave space into which other firms would move. Most of the new employment due to the project would occur as new jobs are created in the buildings that would be vacated by those moving to the project. Some new employment may also occur within the project, both from new out-of-town firms and from expansion of existing local firms that relocated to the project. Since tenants for the proposed project are not known, it is not possible to predict which buildings would be vacated. Most of the workers filling new positions within the project would be already employed in San Francisco. The new employment would be expected to be distributed throughout the Downtown.

Factors That Determine Housing Affordability

A determination of housing affordability is relevant only for households and not for individual downtown workers. Housing is purchased or rented based on the combined resources of the household unit, and housing decisions result from consideration of all household members./7/

Housing affordability is determined by three factors. It is because of all of these factors that households with similar incomes may have very different abilities to pay for housing. The most important factor is the financial resources of worker households, including the incomes of all wage earners, equity in a prior home, and other wealth and debt. Another factor is the amount of financial resources allocated for housing, which is influenced by household demographic characteristics, housing preferences, the potential tax advantages of home ownership, the investment potentials of housing, and the prices of other goods and services. The third factor is the availability and cost of financing and the housing choices (types of units, locations, prices, rents) within San Francisco and elsewhere in the region./7/

Feasibility of Performing A Housing Affordability Analysis

Recht Hausrath and Associates, a Bay area urban economics firm, concluded in a recent study that accurately identifying housing affordability characteristics for persons who would enter the San Francisco housing market as a result of a new office project is a complex problem, difficult to solve. One major problem is that the identity and financial resources of the persons employed in the new space cannot be known prior to occupation of the project. Second, even if such information were to be obtained, it would not provide a satisfactory basis for estimating the housing impact of the project. The reasons for this include:

- Persons actually working in newly constructed space, as noted above, would not necessarily be those that are newly employed in San Francisco as a result of the project (Recht Hausrath, pp. 6, 8, and 15);
- Although some of the employment opportunities in the Downtown would be newly available, those filling the positions may not be newly employed in

San Francisco - most persons obtaining newly available employment in the City have been employed there previously;

- Persons newly employed in San Francisco in newly created jobs may not have obtained their job as a result of new office development; their employer may have created the new opportunity irrespective of a new project (Recht Hausrath, pp. 11 and 23).

Along with the factors above, identifying housing affordability for a specific household would require a survey that probed well beyond the conventional survey information, such as income, housing preference, and current housing costs, to ask for information such as household assets and obligations, housing assistance through family networks, tax position, and health. This kind of information is necessary to obtain an accurate picture of housing needs and desires and the ability to fulfill them (Recht Hausrath, pp. 4-5, 17-19, 28-30), yet obtaining such information is unlikely since respondents may not be willing to provide such detailed information. The information obtained from such a survey would be a very limited indicator of the actual effects of new office construction on housing because any identifiable survey population may be an undetermined fraction of office workers responsible for housing impacts.

Survey respondents would probably be willing to identify what they currently pay for housing, to respond to questions about housing preferences, and to provide information on housing type, location, and tenure, on household demographic characteristics, and on household income. This information would provide a description of actual housing behavior and an indication of housing preferences. It would not necessarily provide an accurate description of current housing affordability or what workers could afford as housing market conditions change./7/

Appendix C, Table C-4, pp. 194-195, illustrates housing affordable to individuals and households with a wide range of incomes, assuming 30% of gross household income is spent for housing. Data in the Table rely on published sources of office worker incomes (not household incomes) and prices of housing (without regard to housing availability). Assuming a 20% down payment,

30-year mortgage, and a 16% interest rate, Table C-4 illustrates that most project employees would not be able to afford ownership housing in San Francisco although, depending on the number of workers per household, some would be able to do so. Based on the stated assumptions, most project employees, except the lowest-paid clerical workers desiring to live alone, would be able to afford rental housing in San Francisco. As discussed above, these conclusions should be qualified because household circumstances vary. Housing affordability is determined not only by household income and price of housing, but also by equity in existing real estate, savings, debt, access to credit, interest rates, number of dependents, number of wage earners, and preferences. Reliable quantification of housing affordability is not possible without knowing particular household circumstances.

FISCAL FACTORS

Revenues to City

The project would have a fair market value of about \$42.25 million (1982 dollars).^{9/} Property is now assessed in California at one hundred percent of fair market value. Based on the 1981-82 tax rate of \$0.945 per hundred dollars of assessed value, the project would generate about \$399,000 in revenue to the City's General Fund from the non-bond property tax, a net increase of about \$373,200 more than the property tax revenue generated by the site in 1981-82 (see Table 6, p. 95).

The building would also generate property tax revenues to retire bond debts. The tax rate at which these revenues would be generated in 1985 would depend on the amount of principal and interest payments due in that year and the total assessed value of property in San Francisco. The fiscal year 1981-82 rate is \$0.19 per hundred dollars of assessed value. If that were the 1985 rate, when the building would be occupied, annual revenues from the building would be about \$80,300, a net increase of about \$75,100 above 1981-82 revenues. The total property tax revenues of \$503,000 would be distributed as shown in Table 6, assuming the same distribution as in the 1981-82 fiscal year.

Tenants of the existing and proposed building would pay either the payroll or gross receipts tax, whichever is greater. Assuming that all tenants pay a payroll tax, it would be paid on the earnings of about 500 existing office employees and 70 other employees at the project site. At a rate of 1.5% of total earnings, payroll tax revenues presently total about \$180,000./10/

Payroll taxes would be paid to the City General Fund on the earnings of approximately 975 of the 1,150 employees in the project. The remainder would be exempt from the tax either because they would work for banks or insurance companies (which are not required to pay San Francisco payroll taxes), because they would work for small, retail tenants with tax liabilities of less than \$500, or because they would be owners of businesses (who are also exempt). Based on an average wage of \$27,200 for office workers and \$12,500 for other project employees, the payroll tax revenues from the project would be about \$355,000, a net increase of about \$175,000 over existing revenues./10/

TABLE 6: DISTRIBUTION OF PROPERTY TAX REVENUES FROM PROJECT SITE IN 1982 AND 1985 (1982 dollars)

<u>Agency</u>	<u>Ad Valorem Tax Rate*</u>	<u>Percent</u>	<u>1982 Revenues**</u>	<u>1985 Revenues***</u>
City and County of S.F. General Fund	\$0.945	79.4	\$25,800	\$399,000
S.F. Unified School District	0.142	11.9	3,900	60,300
S.F. Community College District	0.025	2.1	700	10,500
Bay Area Air Quality Management District	0.002	0.2	100	900
BART	<u>0.076</u>	<u>6.4</u>	<u>2,000</u>	<u>32,100</u>
TOTAL	1.19	100.0	32,500	\$502,800

* Rounded.

** Based on an assessed valuation of \$2,731,000, rounded.

*** Based on an assessed valuation of \$42,250,000, rounded.

SOURCE: Environmental Science Associates, based on information from the San Francisco Controller's Office

Sales tax revenues are generated both by employee expenditures and by retail sales on the site. Sales tax revenues allocated to the City and County of San Francisco are 1.25% of taxable sales. Sales tax revenues generated by existing uses on the project site are about \$7,800 from employee expenditures and \$27,600 from retail sales per year./11/ Estimated sales tax revenues generated for the City by project employees' expenditures would be about \$15,300, a net increase of about \$7,500. Assuming \$120 in taxable sales per year per sq. ft. of retail space, the project retail uses would generate about \$15,000 annually, a net decrease in revenues to the City of about \$12,600.

The building owners pay a gross receipts tax on rental income from the existing buildings on the site. Total annual rental income is about \$377,800./9/ At a rate of 0.3%, annual gross receipts tax revenue from existing buildings is about \$1,100. Based on estimated total annual rents for the project of about \$7.3 million (assuming annual rents of \$30 per sq. ft. of office space and \$35 per sq. ft. of retail space, in 1982 dollars), gross receipts tax revenue (assuming full occupancy) would be about \$22,900 annually. Gross receipts tax revenue to the City would increase by about \$21,800 due to the project.

General Fund revenues for the City and County of San Francisco from the project would total about \$807,200, based on tax rates and fees in effect in early 1982. General Fund revenues from existing uses on the site totaled about \$242,300 in 1981-82; the project would result in about a \$565,000 net increase in annual General Fund revenues.

MUNI

The City's General Fund provides a subsidy to the Municipal Railway's operating budget that covers the difference between Muni's costs and the revenue Muni receives from fares and from federal and state governments. This subsidy represents the cost of Muni to the City. The 1980-81 General Fund subsidy (most recent Muni estimate) is estimated by Muni at \$0.39 per ride./12/ Assuming that about 29% of the employees who occupy the existing buildings on-site ride Muni to and from work, the existing General Fund subsidy to Muni required by on-site employees is about \$32,100 per

year./13,14/ Assuming the 1981-82 per-ride subsidy would remain the same in 1985 and that 29% of the project employees would ride Muni to work, the project would create the need for a General Fund subsidy to Muni of about \$60,800 at 1981 costs, a net increase of about \$28,700./15/

This conclusion should be qualified because the Muni deficit-per-mile figure is based on 1980-81 data, the marginal cost is based on all rides and not peak-period riders, and the total project-related deficit is calculated using only those workers who would use Muni as their primary mode of transportation while excluding those workers who would use a combination of transportation modes, such as Muni and Southern Pacific.

Effective April 1, 1982, the Muni fare per ride was increased from \$0.50 to \$0.60. (Effects of this increase in Muni finances cannot be reliably calculated at this time.) The increase was triggered primarily to meet the fare box revenue requirements of Assembly Bill (AB) 1107. AB 1107 allows Muni to receive a portion of the one-half cent BART sales tax revenue for operating expenses provided that at least one-third of Muni's annual operating cost is paid from fare box revenues. The effect of the fare increase is not reflected in the deficit per passenger figure used in the above analysis.

The San Francisco Board of Supervisors, on April 27, 1981, approved an ordinance (224-81) to assess new downtown commercial development to support Muni. The plan called for levying a one-time fee of up to \$5.00 per gross square foot upon construction of new downtown office space. The ordinance, currently in litigation, would contribute funds for maintaining and augmenting Muni transit services. On February 7, 1983, the Board of Supervisors defeated a resolution to settle the suit.

According to a memorandum entitled "Muni's Plans to Accommodate Downtown Growth" issued by Dean Macris, Director of Planning, (August 5, 1982), Muni expects to be able to meet projected cumulative demand due to downtown office development without new City taxes. According to the worst-case scenario in the memorandum, the San Francisco Railway Improvement Corporation, a non-profit corporation established in 1971 for the purpose of selling bonds

for transit improvements, may have to raise about \$111 million through the sale of bonds over a 10-year period to finance Muni expansion.

BART

Sales tax revenues generated on the site by the 0.5% BART sales tax are presently about \$14,100 a year. Of that amount, BART receives about \$10,600 directly, and the remaining \$3,500 is distributed by the Metropolitan Transportation Commission among BART, Muni and AC Transit. Revenues from the BART sales tax generated by the proposed project employees' expenditures and from on-site retail sales would be about \$12,100. Of this total, BART would receive \$9,100 directly, and the remaining \$3,000 would be distributed by the Metropolitan Transportation Commission. The project would result in a net decrease in sales tax revenue to BART of about \$2,000.

In 1982, the average BART operating revenue was \$1.05 per ride, or 50% of the average operating cost (\$2.10) per ride./16/ It is estimated that about 15% of the employees who occupy the existing buildings ride BART to work. The estimated annual cost to BART not covered by these riders' fares is about \$44,700./17/ BART's current revenues from the sales tax and BART's share of property tax revenue from the site total about \$12,600. BART's net deficit as a result of the activities at the site is about \$32,100. Assuming the 1982 deficit per rider would be the same in 1985 and that 15% of project employees would ride BART to work, the project would generate a deficit of about \$84,700./18/ After subtracting BART's revenues from sales and property taxes which would be generated by the project (about \$41,200), BART's net deficit would be about \$43,500, or about \$11,400 more than for present site activities.

CUMULATIVE FISCAL CONSIDERATIONS

Since 1979, five studies have been prepared which analyze fiscal effects of development in the City's C-3-0 Downtown Office District. The studies were prepared by: Recht, Hausrath and Associates, Sedway/Cooke, Gruen Gruen + Associates, Arthur Anderson and Co., and David Jones, and are compared and discussed in the 101 Montgomery Street Final EIR, (EE 80.26, certified May 7, 1981, pp. 189-199)./19/ This document is available for public review

at the Department of City Planning, Office of Environmental Review, 450 McAllister St. These studies differ in various ways: the questions they ask, the data sources they use, the methodologies they employ, and the conclusions they draw. Table 7, p. 100, compares the purpose, study methodology, and conclusions of the five studies.

The project would probably have an initial fiscal benefit. Because project revenues to the City would probably increase at a slower rate than would costs, due to Proposition 13 limitations on property tax increases, cumulative costs of providing services to currently proposed and approved development would eventually overtake revenues generated (assuming no new revenue sources were found, the rate of new development were to decline and the project were not resold).

TABLE 7: SUMMARY OF RECENT STUDIES ON FISCAL IMPACT OF DOWNTOWN DEVELOPMENT

STUDY, AUTHOR, DATE	PURPOSE OF STUDY	DATA SOURCES	STUDY METHODOLOGY	CONCLUSIONS
"Fiscal Concerns" in Downtown San Francisco Conservation and Development Planning Program, Phase I Study, Sedway/Cooke, et al., October 1979, pp. 56-59	To qualitatively assess the likely fiscal impact of new development in the C-3 area under Proposition 0.	SPUR STUDY (1975)	SPUR cost/revenue estimates for downtown in 1973 and for projected growth 1974-1990 were assumed. Proposition 13's effect on revenues and the possible need for increased transportation infrastructure were considered. Generalized conclusions about fiscal impact of new development were drawn.	1) After Proposition 13, "costs may exceed revenues in the downtown by as much as 25%." 2) "[N]ew downtown development will not solve the city's growing fiscal problem; without new revenue sources, development will make it worse in the long run."
Downtown Highrise District Cost Revenue Study, Arthur Andersen & Co., November 1980	To quantify for 1976-77 and 1978-79 how much revenue the C-3-0 area generated and how much it costs to provide city services to the area.	Data compiled from city records and through conversations with city officials.	Only revenues generated within the C-3-0 and costs of providing services to the C-3-0 counted. "The principle guiding the study methodology was to calculate the amount of revenue that San Francisco would lose and the costs that could be reduced if the Downtown Highrise District were a separate city."	The C-3-0 generated \$56.79 million in 1976-77, or 61% more than the cost of city services to the area. In 1978-79, revenues were \$53.29 million, or 48% greater than costs.
"Fiscal Considerations" Appendix C, 101 Montgomery Street FEIR, Recht Hausrath & Associates, January 1981.	To draw generalized conclusions about "how new development downtown in a post-Proposition 13 environment is likely to change the City's fiscal health from what it would be without new development."	SPUR Study, city records and conversations with city officials.	Under alternative assumptions about the cost/revenue balance in existing buildings and in new buildings, the fiscal impact over time of new development was compared to that of no new development.	"[A]n on-going process of new development would improve the City's fiscal situation."
Downtown Highrise District Cost/Revenue Study, David Jones, February 1981.	To quantify for 1978-79 the revenues generated by businesses in the C-3-0 and the service costs imposed on the city and BART by the C-3-0.	Arthur Andersen study.	The Jones study differs from the Andersen study primarily as follows: 1) Costs of BART (but not revenues to BART) are included; 2) Only revenues paid by businesses and building owners are considered; 3) Muni deficit is computed differently; 4) Most costs are estimated as a percentage of revenues for citywide services rather than actual service demand in the C-3-0.	The C-3-0 imposed costs of \$94.4 million on San Francisco and BART, or 125% more than the revenues the area's businesses and building owners generated to San Francisco.
Fiscal Impacts of New Downtown High-Rises on the City and County of San Francisco, Gruen Gruen + Associates March 1981	To quantitatively estimate city revenues from the C-3-0 and costs of serving the C-3-0 in 1998, assuming the addition of 30 million square feet of building space in the C-3-0 between 1981 and 1998.	Arthur Andersen study; data compiled from city records and through conversations with city officials.	"Only direct effects are considered." Costs are only measured for services "provided within the physical limits of the C-3-0 district" and revenues are limited to "taxes on buildings within the district and the activities that take place within those buildings." Assumes the Arthur Andersen study is accurate and builds upon it.	In 1980, revenues from the 39 million square feet of building space in C-3-0 were 1.66 times as large as costs. In 1998, after completion of the 30 million square feet of new space, revenues from the entire 69 million square feet of C-3-0 building space would increase to 1.92 times as large as costs.

SOURCE: Recht, Hausrath and Associates, January 1981.

NOTES - Employment, Housing and Fiscal Factors

/1/ Relocation information is based on a mail and telephone survey of site tenants performed by Environmental Science Associates in March 1982.

/2/ Projections are based on the Bay Area Input-Output Model from Cooperative Extension Service, University of California, Berkeley, San Francisco Bay Area Input-Output Model 1967-1974, July 1978. A multiplier of 1.18 was used for FIRE and 1.55 for construction.

/3/ ABAG, Bay Area Office Growth, Working Papers on the Region's Economy, Number One, April 1981.

/4/ The San Francisco Office/Housing Production Program, August 19, 1982.

/5/ Report of the Citizens Housing Task Force, San Francisco, July 29, 1981 and Berkeley Planning Associates, Displacement in San Francisco, September 2, 1980.

/6/ According to "Office Housing Production Program (OHPP) Interim Guidelines" January 1982), the project would generate:

$$\frac{270,910}{250} \text{ gross sq. ft.} \times \frac{40\%}{1.8} = 242 \text{ housing units}$$

(Based on 250 gross sq. ft. per employee, 40% residing in San Francisco, and 1.8 employees per household.) If the demand by existing office employees on the site is subtracted from the demand generated by project office employees, the project would generate a net demand for:

$$(1,084-533) \times \frac{40\%}{1.8} = 122 \text{ housing units}$$

/7/ Housing impact is estimated based on the methodology explained and applied in 101 Montgomery St., Final EIR, EE80.26, certified May 7, 1981, pp. 81-91b and 300-309.

/8/ The Housing Affordability discussion is based primarily on a report titled "The Feasibility of Performing a Housing Affordability Analysis Relevant to Office Growth in Downtown San Francisco," prepared by Recht Hausrath and Associates, Urban Economists. The study is on file and available for public review at the Office of Environmental Review, 450 McAllister, 5th Floor.

/9/ Carl Danielson, Lincoln Property Co., letter, February 25, 1982. Current rental income stated does not include percentage of gross receipts, which is part of the rental agreement for certain retail tenants on the site.

/10/ Office workers are assumed to have an average annual salary of about \$27,200 based on average annual earnings of \$16,300 for downtown office workers in 1974 (SPUR, 1975). Data are inflated by about 67%, the national average percentage increase in weekly earnings of FIRE employees between 1974 and the end of 1981 (U.S. Bureau of Labor Statistics Monthly Labor Review, February 1982). Retail, maintenance and textile workers are assumed to have an average annual income of \$12,500 based on Annual Planning Information, (California Employment Development Department, May 1981).

/11/ Taxable expenditures within the central business district per office worker were \$715 per year in 1974 (SPUR, 1975); see note /3/ above. Based on an average salary of \$27,200 for office workers in 1982, taxable expenditures would be about \$1,170 per year in San Francisco. Other employees are assumed to have an income of \$12,500 per year and make taxable expenditures per year of \$536 per year.

/12/ Bruce Bernard, Muni Chief Accountant, telephone conversation, August 10, 1982. Based on 1981-82 Muni additional cost per ride (i.e. marginal cost) of \$0.71 and average fare revenue per trip of \$0.32. (A Muni fare increase from 50 to 60 cents became effective April 1, 1982. Effects of this increase on Muni finances cannot be reliably calculated at this time.)

/13/ Office of Environmental Review (OER), Guidelines for Environmental Evaluation - Transportation Impacts, October 1980.

/14/ Assuming 260 work days per year, two rides per day and absenteeism of 10% (holidays, vacations, sick days), each worker will ride an estimated 468 times per year. Therefore, the cost is: 606 workers x 29% ride Muni x 468 rides per year x \$0.39 deficit per ride = \$32,080.

/15/ 1,149 project workers x 29% ride Muni x 468 rides per year x \$0.39 deficit per ride = \$60,800 total General Fund subsidy to Muni, due to project. \$60,800 - \$32,100 = \$28,700 net increase in subsidy required for Muni due to the project.

/16/ Sy Mauber, Manager of Public Information, BART, telephone conversation, August 10, 1982. This information is based on BART's 1981-82 budget and does not include the effect of a fare increase that became effective in August 1982.

/17/ 606 workers x 15% ride BART x 468 rides per year x \$1.05 cost per ride = \$44,700.

/18/ 1,149 workers x 15% ride BART x 468 rides per year x \$1.05 cost per ride = \$84,700.

/19/ The Gruen Gruen + Associates and Arthur Anderson studies were paid for by the San Francisco Chamber of Commerce. The Sedway/Cooke studies were paid for by the the City and County of San Francisco. The David Jones Study was prepared under the auspices of San Franciscans for Reasonable Growth. The Recht Hausrath & Associates Study was paid for by Environmental Science Associates under contract to the project sponsor for the 101 Montgomery St. Building and reviewed by the Department of City Planning.

E. TRANSPORTATION, CIRCULATION AND PARKING

CONSTRUCTION EFFECTS

The 22-month construction period would include about three months for site preparation, one month for excavation, three months for foundation preparation, three months for steel erection, six months for exterior finishing, and six months for interior finishing./1/ Heaviest daily project truck volumes would occur during the first four months during demolition and excavation, with about 18 truck round trips per day, or an average of six truck movements per hour in or out of the project site between 9 a.m. and noon, and between 1 p.m. and 4 p.m. Trucks are expected to follow haul routes via Montgomery St. to Mission-Beale Sts. or Harrison-Third Sts. on-ramps of the James Lick Freeway to Peninsula disposal sites. Ten round trips per day are estimated during the nine months for steel erection and finishing. Delivery of construction materials would occur throughout the remainder of the building period, at a reduced rate. As required by union contracts, the general contractor would provide off-street parking for construction workers on the project site, or at an off-site location. This would the minimize demand for on-street parking by construction workers.

Sidewalks along the Kearny St. and Sutter St. frontages of the project site would be blocked by construction activities; covered wooden walkways for pedestrians would be provided. Partial closures of the curb lanes adjacent to the site would be necessary on both streets, including the peak-period bus lane on Sutter St.; this would reduce street capacity on Kearny St. by about 20% and on Sutter St. by about 25% during project construction. The Level of Service at the intersection of Sutter St. and Montgomery St. would remain at C; the Sutter and Kearny St. intersection would be reduced from Level of Service A to B. The Kearny and Post Sts. intersection would continue to operate at Level of Service A (see Appendix D, Table D-5, p. 205, for definitions of Level of Service).

Construction walkways on Kearny St. and Sutter St. would increase pedestrian congestion, and would also interfere with the flow of buses on Sutter St. and Kearny St., including the peak-period bus lane on Sutter St. (see Figure 29,

p. 105). Project construction would require that the bus stop on Sutter St. at Kearny serving the 2, 3, 4, and 45 lines be moved to one of three alternative locations: on Sutter St. west of Kearny; to mid-block, between Kearny and Montgomery Sts., or to Sutter and Sansome Sts. Availability of queuing room for peak-hour riders would be a factor in selection of an alternative stop./2/

If construction of the approved San Francisco Federal Savings and Loan Association (at Kearny and Post Sts.), and 333 Bush St. buildings, and the proposed Russ Tower (350 Bush St.) building, were concurrent with project construction, about 70 trucks would enter and leave the four-block area on a daily basis during the first four months of construction of these projects. Combined with the diminished street capacities on Kearny and Sutter Sts. due to the project, this cumulative construction would, in a worst-case, temporarily reduce the Level of Service at Kearny and Post Sts. from A to B. Other intersection Levels of Service would not be expected to change.

PROJECTED TRAVEL DEMAND

The proposed project would generate approximately 400 net new person-trips during the p.m. peak hour, based on the net increase of 535 employees on site. Existing on-site employment generates about 440 peak-hour trips. The peak-hour travel generated by the project would result in an associated demand for about 140 trips by auto, 110 on Muni, and 60 on BART. The remaining demand for 90 trips would primarily be for travel on other transit carriers and other modes such as walking or cycling (see Table 8, p. 106).

Appendix D, p. 196, discusses the methodology of the travel demand analysis. Peak-hour travel by mode for the project and cumulative development is shown in Table 8. The modal assignments have been made assuming existing travel patterns and do not attempt to predict any modal shift (see Appendix D, p. 196, for further discussion). A total of 18.8 million gross sq. ft. of new office space is proposed, approved, or under construction in the City. Table C-2, pp. 190-192, in Appendix C, shows the projects included in the cumulative analysis. About 1.5 million gross sq. ft. of existing office space would be replaced by proposed development, resulting in about 17.3 million gross sq. ft. of net new office space. This growth would generate about 51,600 pte's during the weekday p.m. peak hour (see Table 8, p. 106).

TABLE 8: PROJECTED PEAK-HOUR PERSON-TRIPS BY TRAVEL MODE*

Modal Type	Projects Under Construction**	Approved Projects**	Projects Under Formal Review**	222 Kearny Project	Total
Automobile	8,040	4,830	3,320	140	16,330
Muni	6,310	3,820	2,640	110	12,880
BART	4,260	2,570	1,790	60	8,680
AC Transit	1,980	1,180	800	30	3,990
SamTrans	290	170	110	10	580
SPRR	1,080	650	455	15	2,200
GGT	950	570	390	20	1,930
Ferry	200	120	75	5	400
Other	1,710	1,470	1,370	10	4,560
	24,820	15,380	10,950	400 ***	51,550

* Projections based upon distribution shown in Table D-3, Appendix D, p. 202.

** Individual projects are listed in Table C-2, Appendix C, pp. 190-192. The 222 Kearny St. project has been separated here from the projects under formal review totals shown in Table C-2.

*** Less trips by existing on-site employees

SOURCE: Environmental Science Associates, Inc.

The bridge and freeway system serving the City is currently near capacity during peak hours, so the present population of persons traveling by single-occupant automobiles might be expected to change in the future. Much of the City-wide peak-hour increase might be expected to be accommodated by a shift from single-occupant automobile to ridesharing or public transit.

In this and other San Francisco EIRs, a land-use type of approach has been used to estimate employment and the resultant transportation impacts of both the proposed project and cumulative development. An alternate type of approach is to forecast travel demand based upon regional projections of future employment (employment trend approach)./3/ Appendix D-6, pp. 203-207, contains a discussion of the differences between the two approaches.

TRANSIT

An analysis was made of the cumulative transit impacts due to development in downtown San Francisco as set forth in the Department of City Planning

Guidelines. The analysis was conducted on a system level that considered only the lines or blocks of lines that serve the project site, and not the entire transit system. As a "worst case", this analysis assumes no expansion in the transit system and the results are not dependent on increased City, State, or Federal funding. If existing City, State, or Federal funding were to decrease, operating conditions on the Muni and other carriers would be expected to deteriorate. Conversely, if City, State, and Federal funding were to increase over existing levels, operating conditions would be expected to improve.

The results of the transit analysis are shown in Table 9, p. 108. The table shows projected ridership for the existing-plus-cumulative condition, which includes the 17.3 million gross sq. ft. of net new cumulative office development and the 0.6 million gross sq. ft. of net new retail development. Ridership from the project and load factors based upon existing capacity are also shown in Table 9. As all of the transit agencies have five-year plans for improving service, load factors based upon capacity proposed to occur in the current five-year plan cycle (1982-1987) for each transit agency are also shown in Table 9. Existing transit ridership is also shown with existing capacities in Table D-1, Appendix D, p. 198. Proposed capacities are discussed in Appendix D, p. 197.

The project would generate about 260 net new p.m. peak-hour transit trips per day, of which about 110 would be on Muni./4/ The project, plus cumulative development, would generate an additional 30,680 peak-hour transit trips (total person trips minus "automobile" and "other trips" in Table 8) by 1990, of which about 12,890 would be on Muni (see Table 8, and Appendix D, Table D-2, p. 200).

The existing loads plus the project trips and cumulative trips on the 37 Muni lines with stops within 2,000 feet of the site are expected to result in about 37,800 outbound p.m. peak hour trips./5/ The project would generate approximately 110 p.m. peak-hour Muni trips. Project-generated riders during the p.m. peak hour would be about 0.9% of the demand from the 17.3 million gross sq. ft. of net new cumulative office development and the 0.6 million gross sq. ft. of net new retail development (see Table C-2, p. 192. Line by line Muni loading projections are shown in Table D-2, p. 200.

TABLE 9: AFTERNOON PEAK HOUR OUTBOUND TRANSIT RIDERSHIP*

Agency	PROJECTED RIDERSHIP/ EXISTING CAPACITY						PROJECTED RIDERSHIP/ PROPOSED CAPACITY**			
	Existing (1982)		Future Riders*** w/o project		Future Riders plus Project		Future Riders w/o project		Future Riders plus Project	
	Riders	L.F.	Riders	L.F.	Riders	L.F.	Riders	L.F.	Riders	L.F.
Muni+	25,332	0.91	37,790	1.35	37,900	1.36	37,790	1.14	37,900	1.14
BART										
Transbay	13,660	0.90	19,270	1.27	19,310	1.28	19,270	0.78	19,310	0.78
Westbay	6,445	0.61	9,395	0.90	9,415	0.90	9,395	0.57	9,415	0.57
AC Transit	9,560	0.72	13,520	1.01	13,550	1.01	13,520	1.01	13,550	1.01
SamTrans	1,770	0.78	2,270	1.04	2,280	1.04	2,270	0.36	2,280	0.36
SPRR/CalTrans	5,180	0.79	7,365	1.12	7,380	1.12	7,365	0.92	7,380	0.92
Golden Gate										
Motor Coach	4,510	0.66	6,420	0.93	6,440	0.24	6,420	0.75	6,440	0.75
Ferry	800	0.39	1,195	0.58	1,200	0.58	1,195	0.33	1,200	0.34

* Load factor based upon existing (recommended) maximum capacity. A load factor of 1.00 is equivalent to 100% of recommended seated and standing capacity being used.

Recommended maximum capacity is less than "crush" loadings that occur occasionally.

** Proposed capacity as specified by each agency's Five-Year Plan.

*** Future Riders is the sum of existing riders and riders that would be generated by the 17.3 million gross sq. ft. of office development and the 0.6 million sq. ft. of retail development in the downtown (see Appendix D, pp. 194-195).

+ 1982 Muni ridership is approximate based on a compilation of Muni ridership by the Department of City Planning.

SOURCE: Environmental Science Associates, Inc.

Under the existing-plus-cumulative conditions, after the addition of the ridership from the projected 17.3 million gross sq. ft. of net new cumulative office and 0.6 million gross sq. ft. of net new retail development, demand on most of the affected Muni lines would exceed existing (1982) capacity. This would also be the case for BART transbay and SamTrans. These conditions are shown in Table 9 in the existing-plus-cumulative column under existing-capacity Load Factors, where load factors exceed 1.00. Addition of the project ridership to the existing-plus-cumulative ridership would not cause any Golden Gate Transit, Southern Pacific or A-C Transit routes to exceed capacity and, in general, would increase load factors by 0.01 or less.

As cumulative demand increases, the length of time of peak loadings would increase, spreading peak-of-the-peak conditions over time. As some lines only operate during heavy demand periods (for example, express service for one to two hours during peak periods), there may not be additional capacity available to allow spreading over time without adding more runs. (Additional runs may not require increases in vehicle fleet size as the additional runs would be extending the peak period level of service over a longer period of time. Additional runs would cause increases in operating and maintenance costs and would generate revenue from increased farebox return.)

If existing funding continues and proposed expansion occurs, the future load factors on the transit agencies would be as shown in Table 9 under the Proposed Capacity Load Factor columns. Average future loadings on Muni would be over capacity for both the existing-plus-cumulative condition and after addition of the project ridership. Average loadings on BART Transbay and Westbay, including ridership from the project, from the projected 17.3 million gross sq. ft. of net new cumulative office development, and from the 0.6 million gross sq. ft. of net new retail development, would not be over capacity with the anticipated five-year plan capacity increase. A-C Transit does not propose any increases in transbay service and would, therefore, be operating at 100% of its recommended maximum capacity under existing-plus cumulative conditions.

Addition of the project demand to cumulative demand would not cause loadings on A-C Transit to exceed capacity. Average future loadings on SamTrans would

be under seated capacity when the anticipated capacity becomes available. Southern Pacific/CalTrans proposes to increase seated capacity and would not operate in excess of its recommended maximum capacity under the existing-plus-cumulative conditions as well as after addition of the project demand. Average future loadings (including the cumulative demand and the project demand) on Golden Gate Transit would not exceed capacity when the proposed additions become available.

VEHICULAR IMPACTS

The proposed project would generate approximately 700 daily automobile trips, of which about 140 would occur during the evening peak hour. Cumulative downtown development would generate about 16,300 p.m. peak-hour automobile trips to and from the downtown area, assuming existing modal splits, vehicle occupancies and traffic patterns. The proposed project would account for less than one percent of the projected automobile trips resulting from all new downtown development.

Distribution of auto traffic in the downtown area is partly dependent upon the location of off-street parking facilities. As off-street parking facilities in the immediate site vicinity are at, or near, capacity on weekdays during business hours (see Section III. Environmental Setting, p. 59), traffic volume increases due to the project would not affect intersections immediately surrounding the project site. This assumes that most persons parking in downtown are aware of the lack of available parking and others would become aware of the lack and would avoid the site area. Cumulative downtown development would reduce the vehicular Levels of Service for these intersections, and five major intersections at the freeway approach corridors (see Table 10, p. 111). Cumulative traffic would reduce the Level of Service at Clay and Front from B to D; at Fourth and Harrison from C to D; at Mission and Main from D to F; at Mission and Beale from D to F; and at Washington and Battery from A to C. Additional project vehicular traffic would not worsen these conditions.

TABLE 10: PROJECTED PEAK-HOUR INTERSECTION VOLUME-TO-CAPACITY RATIOS NEAR THE PROJECT SITE

Intersection (peak-hour)	Existing		Existing + Cumulative **		Existing + Cumulative ** + Project	
	V/C	LOS*	V/C	LOS*	V/C	LOS*
Montgomery and Bush (pm)	0.87	D	0.86	D	0.88	D
Kearny and Bush (pm)	0.63	B	0.63	B	0.65	B
Kearny and Sutter (pm)	0.52	A	0.52	A	0.52	A
Montgomery and Sutter (pm)	0.73	C	0.73	C	0.74	C
Fourth and Harrison (pm)	0.78	C	0.89	D	0.90	D
Mission and Beale (pm)	0.89	D	1.66	F	1.66	F
Clay and Front (pm)	0.61	B	0.83	D	0.83	D
Mission and Main (am)	0.85	D	1.37	F	1.37	F
Washington and Battery (am)	0.57	A	0.74	C	0.75	C

* LOS - Level of Service. See Appendix D, Table D-5, p. 205 for definition of Levels of Service. Based upon manual intersection counts on October 29, and November 2-4, 1981, and November 16-17, 1982, all week days.

** The 17.3 million gross square feet of net new cumulative office development is listed in Appendix C, Table C-2, pp. 190-192.

SOURCE: TJKM, Transportation Consultants; Environmental Science Associates, Inc.

PEDESTRIAN ACTIVITY

The main pedestrian access to the project would be on Kearny St. (see Figure 6, p. 21). Project retail uses would have access from Sutter St. The project would increase pedestrian activity, primarily on Sutter, Kearny and Montgomery Sts. During the p.m. peak hour, it is assumed that about one-half of the pedestrian trips would be distributed on Sutter St. west of the site toward Union Square; the remaining half would be walking south to Market St. on either Kearny or Montgomery Sts.

Cumulative pedestrian activity during the noon hour at Sutter and Kearny Sts. would slow pedestrian flow from "impeded" to "constrained" (see Table 11, p. 112). The additional project pedestrian traffic would not worsen these conditions. Cumulative noon-hour volumes at Montgomery and Sutter Sts. would

TABLE 11: PEAK PEDESTRIAN VOLUMES (PROJECT SIDE OF STREET), WITH PROJECT AND CUMULATIVE DEVELOPMENT

Sidewalk Segment*	Sidewalk Width (ft.)		Volume***		Flow Rate****		Pedestrian Flow Regimen +	
	Actual	Effective**	NOON	P.M.	NOON	P.M.	NOON	P.M.
<u>1982++</u>								
Kearny	14	11.5	4,100	3,800	5.9	5.5	Impeded	Impeded
Sutter	15	11	3,360	3,200	5.1	4.8	Impeded	Impeded
Montgomery	12	7	2,600	2,160	6.2	5.1	Constrained	Impeded
Sutter	15	10	3,500	3,050	5.8	5.1	Impeded	Impeded
<u>1990 Base+++</u>								
Kearny	14	11.5	6,500	5,575	9.4	8.1	Constrained	Constrained
Sutter	15	11	5,750	4,960	8.7	7.5	Constrained	Constrained
Montgomery	12	7	5,000	3,925	11.9	9.3	Crowded	Constrained
Sutter	15	10	5,900	4,825	9.8	8.0	Constrained	Constrained
<u>1990 Base + Project</u>								
Kearny	14	11.5	6,750	5,725	9.8	8.3	Constrained	Constrained
Sutter	15	11	5,975	5,100	9.1	7.7	Constrained	Constrained
Montgomery	12	7	5,200	4,125	12.4	9.8	Crowded	Constrained
Sutter	15	10	6,150	4,925	10.2	8.2	Crowded	Constrained

* Project Side of street, for sidewalk segments near Kearny/Sutter intersection, and Montgomery/Sutter intersection.

** Effective width takes account of poles, planter boxes, people standing at store windows, etc.

*** Pedestrians per hour.

**** Pedestrians per minute per feet of effective sidewalk width.

+ See Appendix D, Table D-4, pp. 203 for definitions.

++ Based upon counts made March 9, 1982 by Wilbur Smith & Associates, Inc.

+++ Existing volumes plus estimated pedestrian flows generated by the Crocker Bank Headquarters, 101 Montgomery St. (both under construction), and 333 Bush St. (approved), plus factor for additional proposed projects in Financial District.

SOURCE: Wilbur Smith & Associates

worsen pedestrian flow from "constrained" to "crowded" on Montgomery and from "impeded" to "constrained" on Sutter. The additional project pedestrian flow would reduce the Sutter flow to "crowded," but not further change Montgomery conditions. Afternoon peak-hour flow would worsen from "impeded" to "constrained" at all analyzed locations for cumulative conditions, with or without the project. (See Appendix D, Table D-4, p. 203, for definition of pedestrian flow characteristics.) Increased pedestrian activity on Hardie Place is not anticipated as it would be a dead-end street primarily used for service vehicles, and would not provide pedestrian access to the project. An increase in vehicle-pedestrian conflicts could occur as a result of increased service vehicle traffic serving the project interfering with Kearny St. sidewalk flows at Hardie Place.

PARKING

The project would provide 123 valet parking spaces, in two basement levels accessible by a ramp from Hardie Place. Project short-term parking demand would be 52 spaces and the long-term parking demand would be 138, both per day. The parking demand has been based upon existing travel patterns and is not dependent upon the availability of parking spaces or by the ability of the freeway to carry the additional traffic. The project sponsor has not determined the allocation of the proposed spaces for short- or long-term use. The 123 spaces could provide more than 100% of project short-term space demand, or up to 90% of long-term demand; overall there would be an on-site deficit of about 70 spaces (see Appendix D, p. 201, for further discussion). Commuters and visitors traveling to the proposed building by automobile would compete for spaces in public garages in the area. In the near vicinity (about 1,000 ft.) of the project site are approximately 4,580 commercially available off-street parking spaces of which about 630 are located on sites of projects approved or under formal review and could eventually be lost. Average daytime occupancy in the unaffected spaces is approximately 93% with about 260 spaces open at any one time. Cumulative short-term parking demand from buildings proposed and under construction near the project (that would compete for the parking within 1,000 ft. of the project--walking distance for short-term parkers) is projected to be 350 spaces within 1,000 ft. of the project. The net short-term parking deficit, assuming removal of off-street parking by proposed buildings would be 90 spaces.

Using the methodology described in Appendix D, p. 202, long-term parking demand for the 17.3 million gross sq. ft. of net new cumulative office development and the 0.6 million gross sq. ft. of net new retail development proposed in the greater downtown area has been calculated to be about 16,000 spaces. The project would create a long-term parking demand of 15 spaces, for a total long-term demand of 16,000 long-term spaces (assuming all project spaces were long-term). The project would be less than one percent of the total long-term demand in the downtown. The short-term parking demand from the cumulative office and retail development would be about 1,660 spaces. The project would add demand for 50 spaces for a total short-term demand of about 1,710 spaces. The project would be about three percent of the total short-term demand. The total parking demand (both long and short-term) would be 17,700 spaces of which the project would be less than one percent.

A recent survey by the Department of City Planning shows that there are about 37,000 off-street parking spaces in the C-3 district and an additional 6,500 spaces in the area bounded by The Embarcadero, Folsom, Eighth, and Bryant Streets./6/ Based on average occupancy, about 4,100 spaces are available on a daily basis. Cumulative development in the greater downtown area would provide a total of 5,480 parking spaces (not including the 123 proposed project spaces). The cumulative demand for the whole downtown area, including the project, would create a theoretical net deficit of about 8,150 spaces.

Parking demand has been based upon existing travel patterns and is not dependent upon the availability of parking spaces nor upon the ability of the freeway and bridge system to carry the additional demand. Freeway and bridge capacity into downtown San Francisco is essentially fixed at existing levels because major construction would be required to add new capacity. Therefore, the net deficit of 8,150 spaces does not mean that 8,150 autos would be driving on City streets in search of parking. Rather, the travel demand represented by the parking deficit would most likely shift to ridesharing or transit. Increased ridesharing would not only reduce parking demand but would also reduce traffic impacts from the worst-case impacts shown in Table 10, p. 111. Increased transit use would add to the demands on the regional and local transit systems, particularly Muni.

The deficit may be less than this estimate because the DCP parking survey did not inventory parking in the Civic Center area, areas west of Eighth Street, those south of Bryant Street, or those areas north of Washington Street (all of which contain proposed projects that are included in the cumulative analysis). The survey did indicate that inside the study area, about 6,000 parking spaces have been added since 1967 and about 1,400 are proposed to be added (exclusive of parking spaces to be provided in Yerba Buena Center).

City policy, as stated in the Revisions to the Transportation Element of the Master Plan Regarding Parking, 1977, is to "encourage short-term use of existing parking facilities within and adjacent to the downtown core by converting all day commuter parking to short-term parking in areas of high demand or to car/van pool parking where short-term parking demands are low."/7/ Accordingly, about 14,000 existing off-street spaces in the C-3-0 planning district could be converted to short-term-only parking, if the City enacted such legislation.

Imbalances in long-term parking demand and potential supply, given projected cumulative development and demand, would tend to encourage the use of car pools and van pools, the creation of satellite (intercept) parking facilities in outlying non-residential areas; (with shuttle or expanded Muni service to the downtown area), or increased use of transit directly for commuters from San Francisco or suburban centers (East Bay, North Bay, Peninsula). Peninsula residents, for example, could find Southern Pacific commuter trains more attractive if they could get no closer to downtown by car than the train terminal at Fourth and Townsend Sts. All transit options would add riders on the regional and local transit system, particularly Muni.

OFF-STREET LOADING

The project would include two off-street loading spaces, one 35-ft. space and one 25-ft. space, accessible from Hardie Place. This would meet City Planning Code off-street loading requirements./8/ To allow trucks to enter and leave the spaces without backing up on Hardie Place, the project would include a 35-ft. truck turntable (see Figure 6, p. 21). To meet specifications required in City Planning Commission Resolution No. 9286 (January 21, 1982), this project would require three 35-ft.-long loading spaces.

NOTES - Transportation

/1/ Theodore W. Smith, Dinwiddie Construction Company, letter, August 24, 1981.

/2/ Susan Chelone, Muni Planning Staff, telephone conversation, November 29, 1982.

/3/ The Department of City Planning, Office Environmental Review (OER), has issued a memorandum, dated July 2, 1982, dealing with the subject of the differences in the land-use and employment trend approaches, and recommending that both approaches be used in future EIRs to give a more balanced assessment of future peak transportation demand. This memorandum is on file with and available from the Office of Environmental Review, 450 McAllister St., 5th Floor. The memorandum calls out some of the fundamental differences between the two approaches and also details the limitations of each approach.

/4/ Muni analysis is based on Attachment 3, Guidelines for Environmental Impact Review, Transportation Impacts, Department of City Planning, October 1980.

/5/ The 36 affected Muni lines are the 1, 1X, 2, 3, 4, 5, 6, 7, 8, 9, 11, 12, 14, 14GL, 14X, 15, 17X, 21, 27, 30, 30X, 31, 31X, 38, 38L, 38AX, 38BX, 41TC, 41MC, 42, 45, 66L, J, K, L, M, N, 71, and 80X.

/6/ Inventory of Off-Street Parking Spaces, San Francisco Department of City Planning, May 24, 1982.

/7/ Revisions to the Transportation Element of the Master Plan Regarding Parking, Resolution 7647, San Francisco Planning Commission, January 20, 1977, p. 3.

/8/ City Planning Code, Article 1.5, Section 152, p. 61. For this project, the existing Code requires two off-street loading spaces, one with a length of 35 ft. and one with a length of 25 ft.

F. AIR QUALITY

Long-term air quality impacts associated with project operation would result primarily from increased vehicle emissions. Combustion of natural gas for space and water heating would also generate small amounts of pollutants (primarily nitrogen oxides) relative to those produced by traffic. Projected (1990) daily emissions of pollutants from project-generated traffic are shown in Table 12, p. 117, and compared with projected regional emissions.

Projections of worst-case (poor dispersion meteorology) roadside carbon monoxide (CO) concentrations along several streets carrying project-generated traffic are shown in Table 13, p. 118, and compared with the ambient

TABLE 12: PROJECTED 1987 DAILY PROJECT-GENERATED EMISSIONS

Emission Generator	Pollutant Emissions in tons per day				
	Carbon Monoxides	Hydrocarbons	Nitrogen Oxides	Sulfur Oxides	Particulates
Project*	0.133	0.012	0.017	0.002	0.02**
Cumulative Devel.	11.7	1.03	1.47	0.16	1.76
Regional Emissions***	2,340	515	543	182	536

* Bay Area Air Quality Management District (BAAQMD), "Vehicle Emission Factors Update," July 15, 1981, Table 1 (C) used for pollutant emissions calculation.

** The particulate emission factors represent exhaust, tire wear, and 2.0 gram/mile for dust entrainment from paved roadways (AP-42, Supplement 9, 11.2.5-3, 12/77).

*** Association of Bay Area Governments (ABAG), BAAQMD, MTC, 1982, 1982 Bay Area Air Quality Plan. The region is the nine-County Bay Area Air Quality Management District.

SOURCE: Environmental Science Associates, Inc.

standards. The largest increases over cumulative emissions due to the project (about two percent for one-hour) would occur on Beale St. and Mission St. No excesses of the applicable CO standards are projected on any street under any of the future scenarios.

The 1987 base case CO concentrations would be less than 1982 concentrations, in some cases, because the projected effects of state and federal emission controls on new vehicles would more than offset the growth in emissions due to increased traffic volumes.

The 1982 Bay Area Air Quality Plan found that ozone would continue to be a regional problem in the future, and that CO and TSP would continue to be problems on a local scale, unless additional pollution control strategies were adopted. The project would not directly conflict with those strategies,

TABLE 13: PROJECTED WORST-CASE ROADSIDE CARBON MONOXIDE IMPACTS

Roadway	Averaging Time	Concentration* (ppm)		
		Existing 1982	1987 Base Case**	1987 Base & Project
Beale (between Mission and Folsom)	1-hr	14.8	15.2	15.3
	8-hr	7.7	6.7	6.7
Mission (between Beale and Main)	1-hr	15.6	14.0	14.0
	8-hr	8.8	7.1	7.1
Bush (between Kearny and Montgomery)	1-hr	15.7	12.0	12.0
	8-hr	9.1	7.0	7.0
Kearny (between Sutter and Bush)	1-hr	16.4	12.6	12.7
	8-hr	8.9	6.9	6.9

* Calculations were made for worst-case (poor-dispersion) meteorology. Background concentrations were assumed to be 10.5 ppm for one hour and 6.5 ppm for eight hours in 1982, and 8.4 ppm for one hour and 5.2 ppm for eight hours in 1987, based on the average of the annual second-highest future years according to emission projections. Applicable federal standards, 20 ppm for one hour, 9 ppm for eight hours, would not be exceeded.

** Cumulative development based on Appendix C, Table C-2, pp. 190-192.

SOURCE: Environmental Science Associates, Inc., and BAAQMD, 1975, Guidelines for Air Quality Impact Analysis of Projects, updated for 1981 emission factor revisions.

and alone would have no measurable impact on citywide or regional concentrations, or the frequency of standard violations. However, it would incrementally impede the objectives of the Plan by generating additional pollutant emissions in San Francisco and elsewhere in the air basin. In conjunction with cumulative development, it could increase ambient concentrations and/or standards violations, if the pollution control measures recommended in the Plan are not implemented.

NOTE - Air Quality

/1/ U.S. Environmental Protection Agency, 1975, Compilation of Air Pollutant Emission Factors, Supplement No. 5, p. 11.2.4-1.

G. NOISE

Project construction would occur in three stages: demolition, excavation, and construction. Throughout the 24-month construction period, trucks would initially haul away dirt and debris, and then bring in building materials. Construction activities would temporarily increase noise levels at the site by 10 to 15 dBA from an existing day-night average level (L_{dn}) of 75 dBA on Sutter and Kearny Sts. /1,2/

A spread footing foundation would probably be used; no pile driving is anticipated. During construction, the project contractor would comply with all requirements of the San Francisco Noise Ordinance (Part II, Chapter VII, San Francisco Municipal Code), including limiting noise emissions from powered construction equipment to 80 dBA at a distance of 100 ft. If a second piece of equipment were to operate simultaneously with the first, the resulting noise level would be increased by 3 dBA or 83 dBA at a distance of 100 ft. This increase would be barely noticeable to the human ear. The Noise Ordinance prohibits construction work at night from 8:00 p.m. to 7:00 a.m., if noise from such work exceeds the ambient noise level by 5 dBA at the property line, unless a special permit is authorized by the San Francisco Department of Public Works. During construction, many types of equipment are used. Typical demolition and construction noise levels anticipated for the project are shown in Table 14, p. 120.

The effects of project construction noise would be based on the noise levels generated and the location of sensitive noise receptors relative to the project site. Because the surrounding area contains a residential hotel (Hotel Stanford) and a transient hotel (Sutter Hotel), retail shops and restaurants, branch banks and offices, residents, visitors, and workers would

TABLE 14: TYPICAL COMMERCIAL/INDUSTRIAL CONSTRUCTION NOISE LEVELS AT 50 FEET

<u>Construction Phase</u>	<u>Average Noise Level</u>
Ground clearing	84 dBA
Excavation	89 dBA
Foundations	78 dBA
Erection	87 dBA
Finishing	89 dBA

SOURCE: D.N. May, Ph.D., 1978, Handbook of Noise Assessment, Van Nostrand Reinhold Environmental Engineering Series, p. 211.

be affected by project construction noise. (Figure 2, p. 15, and Figure 11, p. 30, identify the buildings and land uses in the vicinity.)

The Hotel Stanford is located north of the project site, across from Hardie Place, a distance of about 25 feet. The side of the six-story residential hotel facing Hardie Place has openable windows. Interior noise levels during project construction would be expected to reach 80 to 85 dBA, depending upon whether windows were open, during excavation and finishing. These levels would interfere with speech, require raised voices and affect day-time sleepers in the hotel. The restaurant (Orsi) on the ground floor of the Hotel Stanford would also be subject to construction noise; because the restaurant has no windows, the interior noise level would be expected to reach 65 dBA (during excavation and exterior finishing). Presently, the interior noise levels in buildings adjacent to the site are estimated to be 45 to 50 dBA. Noise levels between 60 and 65 dBA would interfere with human speech and concentration, distracting employees and requiring raised voices to communicate. Should construction of the 333 Bush St. project occur simultaneously with the proposed project, noise levels could increase by about 3 dBA, a barely noticeable increase. Noise levels would not be affected by construction of the 466 Bush St. project, or the Russ Tower project.

The Sutter Hotel is located south of the project site across Sutter Street, a distance of about 50 ft. Openable windows of the Sutter Hotel face the

project site. The eight-story hotel and the ground floor bar/restaurant (New Amsterdam Bar and Grill) would be subject to an interior noise level of about 69 to 74 dBA, depending upon whether windows were open during the highest average construction noise level (excavation and finishing phases). These levels would interfere with day time sleepers in the hotel. Noise levels within the Sutter Hotel would not be affected by construction activities at 466 Bush St., Russ Tower or 333 Bush projects.

Offices in adjacent buildings at 130 Sutter St. and 240 Kearny St. would be subject to an interior noise level of about 77 to 82 dBA during the highest average construction noise level, depending on whether or not windows were closed or open. This noise level would also affect ground floor restaurants and retail stores within 25 ft. of the project site. At this noise level, speech would be affected and shouting would be required at two to three feet; telephone communication would, likewise, be hampered./3/ Noise levels would not be affected by construction at 466 Bush St., 333 Bush St., or Russ Tower.

Beyond these adjacent buildings, the interior noise level for buildings at a distance of 250 ft. from the highest level of construction noise, 89 dBA, would be about 60 dBA (assuming openable windows). Noise levels between 60 and 65 dBA would interfere with speech and concentration, distracting employees and requiring raised voices to communicate. Also at the 89 dBA level, construction noise would be audible up to a distance of about 600 ft.; beyond that point, the noise level would be equivalent to the ambient street noise level and would not be expected to interfere with office or residential activities.

NOTES - Noise

/1/ The Environmental Protection Element of the Comprehensive Plan indicated an existing day-night average noise level (L_{dn}) of 75 dBA on both Sutter and Kearny Sts. in 1974. Decibel (dB) is a logarithmic unit of sound energy intensity. Sound waves, traveling outward from a source, exert a sound pressure level (commonly called "sound level"), measured in decibels. dBA denotes decibel, corrected for the variation in frequency response of the typical human ear at commonly encountered noise levels.

/2/ L_{dn} is an averaged sound level measurement, based on human reaction to cumulative noise exposure over a 24-hour period, which takes into account the

greater annoyance nighttime noise. Ten dBA are added to measured or calculated noise between 10 p.m. and 7 a.m.

/3/ U.S. Department of Health, Education, and Welfare, Health Services and Mental Health Administration, 1972, Occupational Exposure to Noise.

H. ENERGY

Pacific Gas and Electric Company (PG&E) would provide electricity and natural gas to the proposed project through its existing distribution systems. The project would require an unknown amount of energy for demolition of the existing structures, excavation, and removal of excavated material and rubble to a disposal site. Energy required for project construction, including fabrication and transportation of building materials, would be about 458 billion British thermal units at-source (Btu), the equivalent of about 79,000 barrels of crude oil./1,2/

Estimated project energy consumption would comply with the state energy conservation standards./3/ Total project annual consumption of electrical energy would be about 128,300 Btu/conditioned sq. ft. per year, compared to a maximum of 129,250 Btu/sq. ft. per year permitted by state standards/4,5/

Space and water heating would be supplied by a natural gas-fired boiler. Air conditioning would be provided by an economizer cycle which would use cool outside air when possible, supplemented by an electric water chiller. A variable air-volume ventilation system would be used. The entire HVAC (heating, ventilating, air conditioning) system would be monitored by the building's automation system which would respond to weather conditions and building occupancy. Parking garage ventilation would be controlled using carbon monoxide monitoring. Office and retail area lighting would be provided by fluorescent fixtures with individual switching. Office lighting would be designed for 70 footcandles maintained illumination at a maximum of two watts per sq.-ft.; other areas would have illumination levels consistent with task and the conforming to Illuminating Engineering Society recommendations./4/ Individual metering would be considered for the tenants' electrical distribution system.

Project operation would consume (at point-of-use) about 3.4 million kilowatt-hours (KWH) of electric energy per year, primarily for ventilation and cooling (see Table 15)./4/ This would be equivalent to the electricity consumption of about 1,035 average residential customers in San Francisco./6/ Average electrical consumption would be about 12 KWH per sq. ft. per year, compared to an estimated average of 16.5 KWH per sq. ft. per year for nine other recently-proposed high-rise structures./7/ Average monthly electricity consumption would be about 0.29 million KWH, or about 0.97 KWH per sq. ft. per month. The connected kilowatt load would be about 2,800 KW./8/ Daily and

TABLE 15: PROJECTED ANNUAL USE OF NONRENEWABLE ENERGY RESOURCES

<u>Building Operation:</u>	<u>Point-of-Use Quantity</u>	<u>At-Source, Billion Btu*</u>
Electricity	3.4 million KWH	35
Natural Gas	2.1 million cu. ft.	2.3
<u>Transportation:**</u>		
Gasoline (vehicular)	114,400 gallons	<u>16</u>
	TOTAL	53.3 Billion Btu

* Quantities of electricity, natural gas, and gasoline represent "point-of-use" energy consumption. The energy equivalents have been adjusted to represent "at-source" energy consumption; i.e., they include energy losses which occur in generation and transmission.

** Excludes gasoline for ferries, diesel fuel for buses and trains, and electricity for trolleys and light rail.

SOURCE: Skidmore, Owings & Merrill; Environmental Science Associates, Inc.

annual electric demand distributions are shown in Figure 30, p. 124. Peak electricity consumption would occur on August afternoons; this would coincide with PG&E's system-wide peak demand period.

The project would consume (at point-of-use) about 2.1 million cubic feet of natural gas per year, for space and water heating (see Table 15)./4/ This would be equivalent to the natural gas consumption of about 20 average residential customers in San Francisco (see Figure 31, p. 125)./6/ Natural gas consumption would be

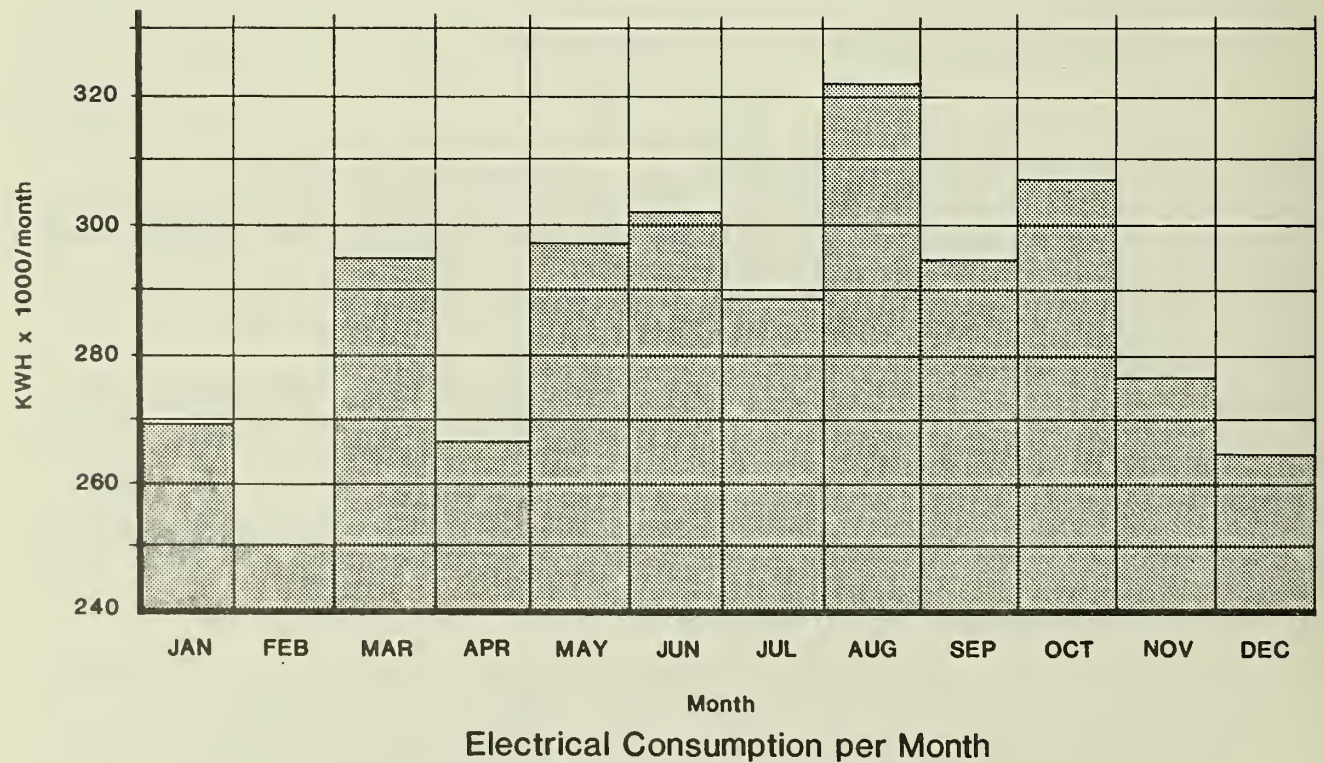
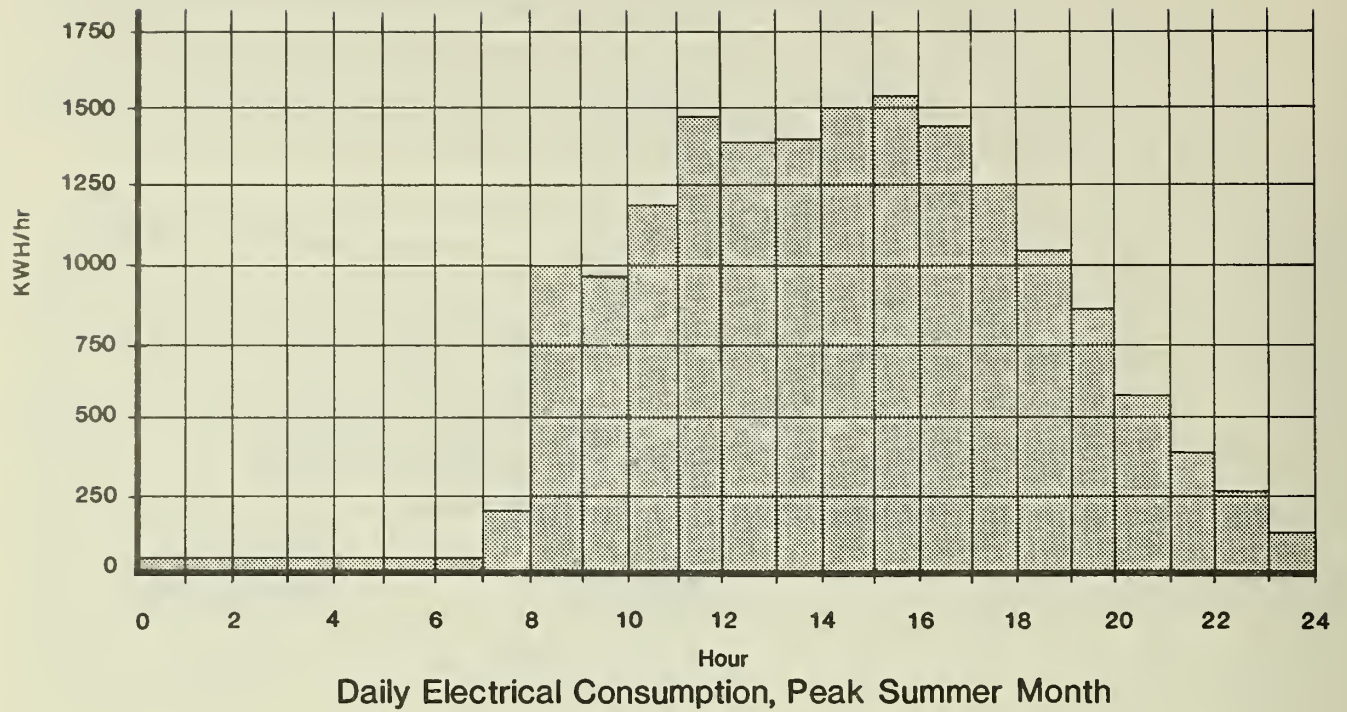


FIGURE 30: Projected Electrical Demand Distribution

SOURCE: Skidmore, Owings & Merrill

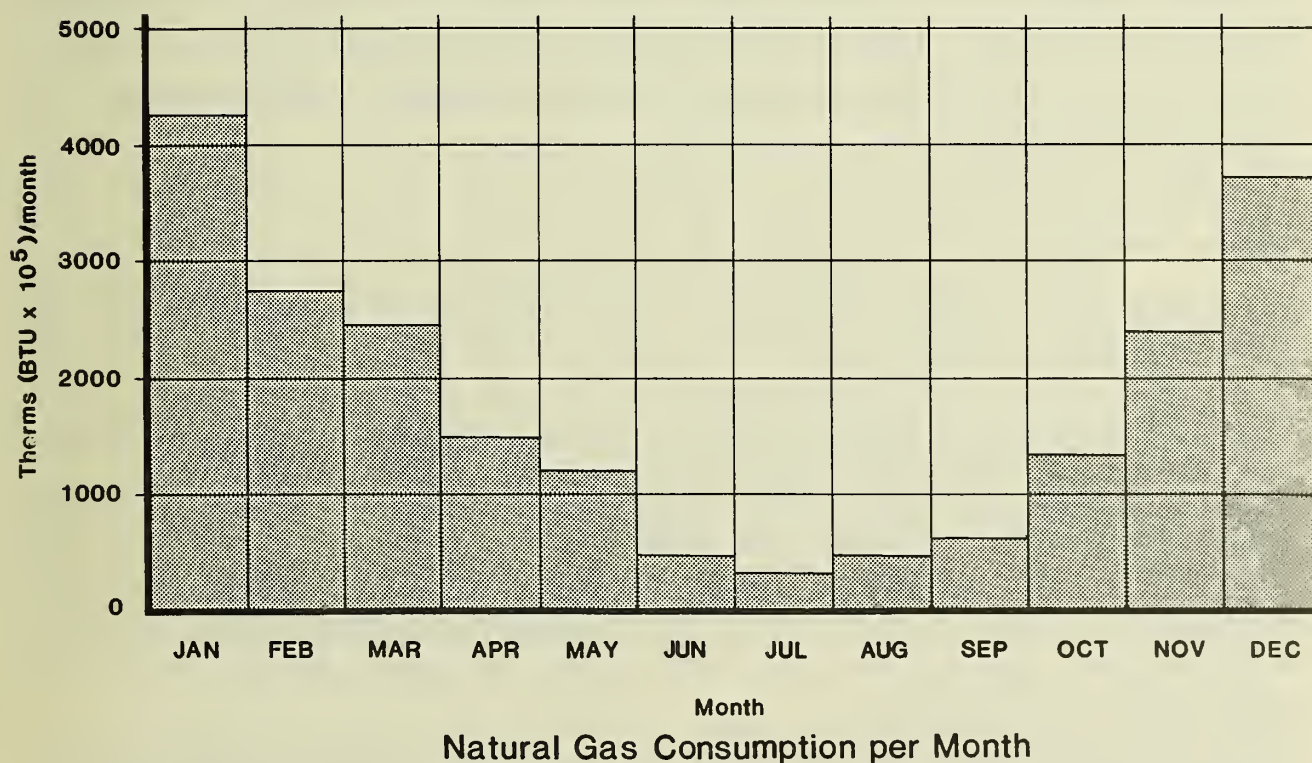
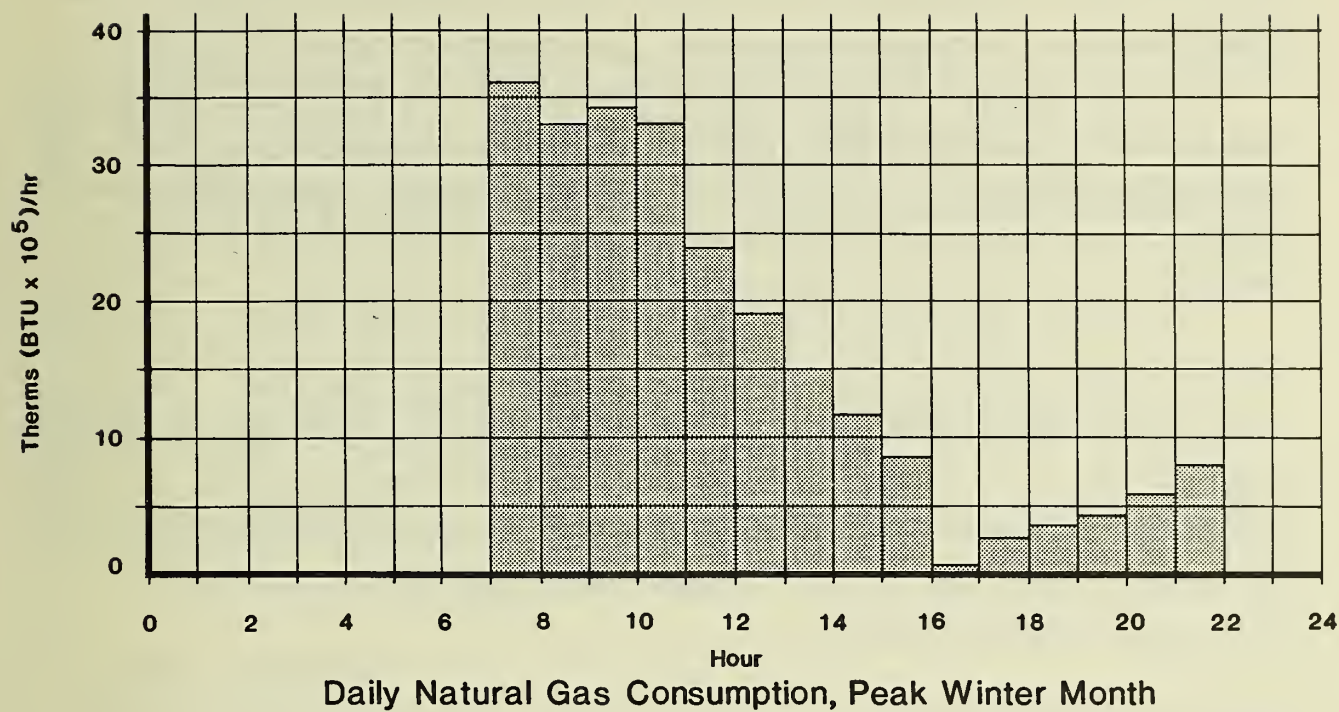


FIGURE 31: Projected Natural Gas Demand Distribution

SOURCE: Skidmore, Owings & Merrill

about seven cubic ft. per year, compared to an estimated average of 35 cubic feet per sq. ft. per year for nine other recently-proposed high-rise office structures./7/ Average monthly natural gas consumption would be about 0.13 million cubic feet, or about 0.4 cubic ft. per sq. ft. per month. Daily and annual natural gas demand distributions are shown in Figure 31, p. 125. Peak natural gas consumption would occur on January mornings. This would not coincide with PG&E's system-wide peak demand period which occurs on January evenings.

Project energy consumption would increase energy use at the site. Existing energy use is estimated to be about 30% of the projected use; because existing buildings were built prior to present energy conservation standards, they are less energy efficient on a per square foot basis. With the exception of Hydro-electricity, much of the increased energy demands would be met by nonrenewable energy resources.

Project-related vehicular use (at point-of-use) would consume about 114,400 gallons of gasoline in 1985 (see Table 15). Additional energy in the form of gasoline for ferries, diesel fuel for buses and trains, and electricity for trolleys and light rail vehicles, would also be consumed. Transportation energy would be provided by nonrenewable resources.

NOTES - Energy

/1/ Hannon et al., "Energy and Labor in the Construction Sector", November 24, 1978, Science, Vol. 202.

/2/ British thermal units (Btu) are units for measuring energy. One Btu is the quantity of heat required to raise the temperature of one pound of water one degree Fahrenheit at sea level. The term 'at-source' means that adjustments have been made in the calculation of the Btu energy equivalent to account for losses in energy which occur during generation and transmission of the various forms of energy, as specified in: ERCDC, 1977, Energy Conservation Design Manual for New Nonresidential Buildings, Energy Resources Conservation and Development Commission, Sacramento, CA; and Apostolos, J.A., W.R. Shoemaker, and E.C. Shirley, 1978, Energy and Transportation, Sacramento, CA (Project 20-7, Task 8).

/3/ State energy efficiency standards are described in CERCDC, February 1980, Conservation Division Regulations Establishing Energy Conservation Standards for New Residential Buildings and New Nonresidential Buildings, California Administrative Code, Title 24, Part 6.

/4/ Skidmore, Owings & Merrill, Interoffice Memorandum, 222 Kearny St. - EIR, March 15, 1982.

/5/ Chip Tabor, Skidmore, Owings & Merrill, letter, March 31, 1982. The Title 24 standard is 126,000 Btu/conditioned sq. ft./year for office space, and 200,000 Btu/conditioned sq. ft./year for retail space. Based 242,530 conditioned sq. ft. of office space and 11,140 conditioned sq. ft. of retail space. Conditioned (heated or air-conditioned) floor area in the project is a larger area than gross floor area defined in the San Francisco Planning Code.

/6/ Residential comparisons are based on consumption averages in San Francisco reported in California Energy Conservation and Development Commission, Quarterly Fuel and Energy Summary, Vol. 2, Nos. 1 and 2, 1976.

/7/ Energy consumption values as reported in environmental analyses for projects listed in Appendix G, p. 216.

/8/ Connected kilowatt load is the total load of all the electrical facilities in the building if all were to operate at the same time.

I. GROWTH INDUCEMENT

The project would add about 185,000 net, new, gross sq. ft. of office and retail space (after subtracting existing space on site) to the Financial District. Employment at the site would increase by about 545, from about 605 to about 1,150. Occupants are not presently known, but would probably include tenants expanding or relocating from other San Francisco locations, tenants relocating from outside San Francisco, and firms new to the Bay Area. Therefore, the increase in employment at the project site would not necessarily represent employment that is new to San Francisco. If the building were fully leased and the office space provided by the project did not create permanent vacancies in other San Francisco office buildings, total employment in San Francisco would increase directly by about 545 jobs due to the project. Approximately 650 additional jobs would be indirectly supported in San Francisco through the multiplier effect (see Section IV., Employment, Housing, and Fiscal Factors, p. 85).

Any net increase in employment downtown would increase demand for retail goods and services in the area. By increasing office employment, the project would intensify demand for retail goods and services. Some of this demand would be met by the proposed retail space on the ground floor of the project, although the project would create a net decrease in retail space on the site.

The project would respond to demand for office space in San Francisco's Financial District. This demand would exist whether or not the proposed project were built. Demand for office space continues the trend of growth in service sector and headquarters office activities and employment in San Francisco. Increases in downtown office space and employment would contribute, in turn, to continued growth of local and regional markets for goods, services and housing.

It is expected that some new downtown workers, including some of those in the project, would desire to live in San Francisco. Employment growth, however, may not directly correspond to increases in demand for housing and City services to residents, as some new jobs would be held by individuals who already live in the City but who previously either did not work or worked outside the City, by those who prefer to live in surrounding communities, or by those unable to afford or locate housing in the City.

Increases in employment downtown would also increase demand for business services to the extent that new space would not be occupied by firms providing those services. In response, businesses providing these services would increase demand for existing space and, possibly, induce further new development.

V. MITIGATION MEASURES PROPOSED TO MINIMIZE THE POTENTIAL IMPACTS OF THE PROJECT

In the course of project planning and design, measures have been identified which would reduce or eliminate potential environmental impacts of the proposed project. Some of these measures have been adopted by the project sponsor or project architects and contractors, and thus are proposed as part of the project; some are under consideration; and some have been rejected. Each mitigation measure and its status is discussed below. Measures under consideration but not now proposed as part of the project, or measures rejected by the sponsor, may be required by the City Planning Commission as conditions of project approval.

ARCHITECTURAL RESOURCES

MEASURES PROPOSED AS PART OF THE PROJECT

- The project would restore and preserve the Sutter and Kearny St. facades of the Adams Building at 200 Kearny St. and the Sutter St. facade of the Central Realty Building at 154 Sutter St.; both buildings are on the City's List of Architecturally and/or Historically Significant Buildings in the Downtown. The sponsor proposes to replace the interiors of the two buildings to meet current building code standards and to maximize space efficiency. The mezzanine glazing, corner detail and corner canopy, which have been altered or removed from the 200 Kearny St. building would be restored. The decorative cornice on 150 Sutter St. would be replaced. Existing floor and window levels of both buildings would be maintained by the new construction.
- The restoration and preservation of the street facades of the Adams and Central Realty buildings which have been altered over time would strengthen the visual relationship of the site buildings to other buildings of similar age, scale, and architectural interest on the north frontage of Sutter St.

URBAN DESIGN

MEASURES PROPOSED AS PART OF THE PROJECT

- The project office tower would be set back about 35 ft. from the Sutter St. facades of 200 Kearny St. and 154 Sutter St. This would reduce the visibility of the project tower from pedestrian levels along the north sidewalk of Sutter St.
- The project would include retail spaces along all of the Sutter St. frontage and 60 ft. of the Kearny St. frontage, which would maintain the pedestrian-oriented uses now on the site, although the area of the site in retail use would be reduced.

EMPLOYMENT, HOUSING AND FISCAL FACTORS

MEASURES PROPOSED AS PART OF THE PROJECT

- The project sponsor would offer tenants currently renting space on-site right-of-first-refusal for space in the project building, at then-current market rates.
- The project sponsor would mitigate the net housing demand of 122 units generated by the project, through off-site development in San Francisco or rehabilitation of vacant units. This could be accomplished either by direct sponsorship of a housing development or by providing financial aid to a housing development, as provided for in the City's Office Housing Production Program./1/

MEASURE NOT PROPOSED AS PART OF PROJECT

- The project sponsor could lease retail space in the project to six or more tenants, to offset the loss of six small-scale retail uses now existing on-site. The project sponsor is considering this measure and would make the decision based on market conditions during the leasing period.

TRANSPORTATION, CIRCULATION AND PARKING

MEASURES PROPOSED AS PART OF THE PROJECT

- A transportation broker in the project management office would encourage transit use through the on-site sale of BART, Muni, and Golden Gate Transit passes to employees, and by distribution of transit information. The broker would encourage employee carpool and vanpool systems, in cooperation with the non-profit RIDES for Bay Area Commuters, by providing a central clearinghouse for carpool information.
- The project sponsor would provide secure and safe bicycle and moped parking facilities to encourage the use of bicycles and mopeds by employees and messengers.
- During the construction period, truck movement would be limited to the hours between 9 a.m. and 4 p.m. to minimize peak-hour traffic conflicts. The project sponsor and construction contractor would meet with the Traffic Engineering Division of the Bureau of Engineering and with the Office of Environmental Review to determine feasible traffic mitigation measures to reduce traffic congestion during construction of this project, and other projects (including, for example, the San Francisco Federal Savings building, the 333 Bush St. building, and the proposed Russ Tower at 350 Bush St.).
- Paving, landscaping and structures in the sidewalk area would be designed (subject to Department of Public Works approval) to minimize interference with pedestrian traffic.
- Building directories and signs for project freight elevators would be placed in the loading area of the building, consistent with proposed off-street loading requirements contained in Guiding Downtown Development, (Department of City Planning, July 1982), to facilitate and encourage use of loading docks.

V. Mitigation Measures

- Upon project completion, with the help of the Department of City Planning, the project sponsor would encourage tenant firms to implement a flexible time ("flex-time") system for employee working hours. (Flex-time is designed to reduce peaks of congestion in the transportation system.)
- The project sponsor would conduct a survey, at a time suggested and in accordance with methodology approved by the Department of City Planning, to assess actual trip generation patterns of project occupants and actual pick-up and drop-off areas for carpools and vanpools. The project sponsor would make this survey available to the Department. Alternatively, at the request of the Department, the sponsor would provide an in-lieu contribution toward an overall City-conducted transportation survey for the Downtown area.

MEASURE NOT PROPOSED AS PART OF PROJECT

- "Eyebolt" fixtures, suitable for suspending Muni trolley wires, could be affixed to the Sutter and Kearny St. project frontages, if this is structurally compatible with restoration of the 200 Kearny St. and 154 Sutter St. facades. The project sponsor is considering this measure; a decision would be made in consultation with the project architects and Muni engineering staff prior to issuance of the final site permit.

MEASURES THAT COULD BE IMPLEMENTED BY PUBLIC AGENCIES AND UTILITIES

- The Department of Public Works could establish "clear zones" at street corners, including the project corner at Sutter and Kearny Sts. to eliminate planter boxes and other street furniture that reduce effective sidewalk width.
- "Late release" signal timing for the pedestrian phase across Sutter St. on the west side of Kearny St. would reduce conflicts with vehicles turning left on Sutter from Kearny. This measure is proposed in the City's Transit Preferential Streets Program and must be implemented by the Department of Public Works.

- Pacific Gas and Electric Company could coordinate work schedules with other utilities for work requiring trenching, so that street disruption would take place during weekends and off-peak hours. This would be done through the San Francisco Committee for Utility Liaison on Construction and Other Projects (CULCOP). CULCOP is composed of representatives of private utilities and city agencies, who coordinate project activities at monthly meetings. This measure would assure that area residents would not be disturbed at night.

CONSTRUCTION NOISE

MEASURES PROPOSED AS PART OF THE PROJECT

- The general contractor would construct barriers around the site, and around stationary equipment such as compressors, to reduce construction noise by as much as five dBA.
- To the extent possible, the general contractor would locate stationary equipment in pit areas or excavated areas which would serve as noise barriers.
- Construction activities would be limited to hours between 7 a.m. and 7 p.m. to reduce disturbance to hotel occupants in buildings to the north and south of the site. (The noise ordinance limits noise after 8 p.m.)

AIR QUALITY/CLIMATE

- During excavation, unpaved demolition and construction areas would be wetted to hold down dust. If this were done at least twice a day with complete coverage, particulate emissions (dust) would be reduced by about 50%.
- The general contractor would maintain and operate construction equipment in such a way as to minimize exhaust emissions.

ENERGY

MEASURES PROPOSED AS PART OF THE PROJECT

- Wherever feasible, office suites would be equipped with individual light switches, time-clock operation and fluorescent lights to conserve electric energy. A centralized management computer system would monitor off-hour (evening and weekend) heating and air-conditioning use.
- The project would comply with the formerly required Federal Energy Building Temperature Restrictions in the operation of heating, ventilating and air-conditioning (HVAC) equipment. The HVAC system would be equipped with an economizer cycle to use outside air for cooling, where appropriate.

UTILITIES AND PUBLIC SERVICES

- The project would incorporate low-flow faucet and toilet fixtures to reduce water consumption and wastewater.
- The building would be equipped with a trash compactor to reduce the volume of solid waste requiring storage and transport. Separate storage facilities for recyclable waste material would be provided.

LAND (Topography, Soils, Geology)

- A detailed foundation and structural design study would be conducted for the building by a California-licensed structural engineer and geotechnical consultant. The project sponsor would follow the recommendations of these studies during the final design and construction of the project.
- If groundwater seepage from foundation footing excavation requires pumping and disposal, water pumped from the site would be retained in a holding tank to allow suspended particles to settle, if this is found necessary by

the Industrial Waste Division of the Department of Public Works, to prevent sediment from entering the storm drain/sewer lines.

HAZARDS

- An evacuation and emergency response plan would be developed by project sponsor or building management staff, in consultation with the Mayor's Office of Emergency Services, to insure coordination between the City's emergency planning activities and the project's plan and to provide for building occupants in the event of an emergency. The project's plan would be reviewed by the Office of Emergency Services and implemented by building management before issuance by the Department of Public Works of final building permits.

CULTURAL

- Should evidence of cultural or historic artifacts of significance be found during project excavation, the Environmental Review Officer and the President of the Landmarks Preservation Advisory Board would be notified. The project sponsor would select an archaeologist or other expert to help the Office of Environmental Review determine the significance of the find and whether feasible measures, including appropriate security measures, could be implemented to preserve or recover such artifacts. The Environmental Review Officer would then recommend specific mitigation measures, if necessary, and recommendations would be sent to the State Office of Historic Preservation. Excavation or construction which might damage the discovered cultural resources would be suspended for a maximum of four weeks to permit inspection, recommendation and retrieval, if appropriate.

NOTE - Mitigation Measures

/1/ Mayor's Office of Housing and Community Development, Citywide Affordable Housing Program, January 22, 1982.

VI. Significant Environmental Effects

VI. SIGNIFICANT ENVIRONMENTAL EFFECTS THAT CANNOT BE AVOIDED IF THE PROPOSED PROJECT IS IMPLEMENTED

ARCHITECTURAL RESOURCES

The project would restore and preserve the facades of the 200 Kearny St. (Adams) building and the 154 Sutter St. (Central Reality) building, both of which are included on the City's List of Architecturally and/or Historically Significant Buildings in the Downtown and rated A and B, respectively. New construction would demolish and replace the existing interiors and the exterior walls (not fronting the streets) of these two structures; existing floor and window levels of both buildings would be maintained.

The north frontage of Sutter St. from Montgomery to Grant Sts. is considered a distinguished, cohesive architectural grouping of post-1906 Earthquake commercial structures. The project tower would alter the visual setting of these buildings as seen from some viewpoints on Sutter and Kearny Sts., and introduce a high-rise element on this frontage.

EMPLOYMENT, HOUSING AND FISCAL FACTORS

Net new office employment generated at the site would result in a demand for 122 new housing units in San Francisco.

TRANSPORTATION

With trips expected to be generated by cumulative development, including the project, in the Downtown it is estimated that many Muni lines would operate beyond maximum recommended capacity (defined as 150% of seated capacity) during the p.m. peak hour in 1990.

VI. Significant Environmental Effects

Cumulative downtown growth by 1990, including the project, would reduce the peak hour Levels of Service at Clay and Front from B to D; at Fourth and Harrison from C to D; at Mission and Main from D to F; at Mission and Beale from D to F; and at Washington and Battery from A to C. Additional project vehicular traffic would not worsen these conditions.

Project parking demand would contribute to the projected deficit in long-term and short-term parking spaces in the Downtown area. The 123 off-street vehicle parking spaces proposed in the project would reduce this deficit but would be inconsistent with City policies to discourage new parking in the Downtown and provide needed new spaces in peripheral areas.

VII. ALTERNATIVES TO THE PROPOSED PROJECT

A. ALTERNATIVE 1: NO PROJECT

DESCRIPTION OF ALTERNATIVE

This alternative would entail no physical change to the project site as it now exists. All three architecturally rated buildings would remain, presumably in the same condition that exists in 1982. Existing retail uses would continue at the site. Dean Witter Reynolds, which has 500 employees occupying 54,000 sq. ft. of floor space, would move to the 101 California St. building; its office space on the site would become available for lease (see Section III, Environmental Setting, pp. 29-62, for a discussion of existing conditions).

This alternative could result in construction of similar office space elsewhere in San Francisco's Financial District or in another Bay Area location. Such a project could, or could not, involve demolition and restoration of historic structures. Environmental characteristics at the project site would remain the same as existed in 1982.

DISTINCTIVE ENVIRONMENTAL CHARACTERISTICS OF ALTERNATIVE

In general, the environmental characteristics of this alternative would remain substantially as described in Section III., Environmental Setting, of this report. Present levels of traffic, parking demand, transit demand, air pollution, noise, energy consumption, on-site employment, and wind, shadow and visual effects now attributable to the buildings on the site would continue to exist. This alternative would lessen employment-related effects identified in Section IV. D., p. 85, as approximately 535 fewer people would be employed at the project site than with the project as proposed. Additional environmental analysis would be necessary to evaluate the impact of the project at the particular alternate site.

VII. Alternatives to the Proposed Project

SPONSOR'S REASONS FOR REJECTION

The project sponsor has rejected this alternative because it would not use the development potential of the site now permitted by the Planning Code. The project sponsor has rejected an alternative location in San Francisco or elsewhere in the Bay Area because there are no more centrally located sites that would meet the project sponsor's objectives and because of his existing interest in the site.

B. ALTERNATIVE 2A: PRESERVATION OF ALL SITE BUILDINGS

DESCRIPTION OF ALTERNATIVE

This alternative would restore all three site buildings, as separate structures, to meet current Building Code and seismic safety standards. Total gross floor area would remain at 94,500 sq. ft., compared with 280,910 sq. ft. with the project. Leasable ground floor area would be reduced, compared to the project, because restoration to code requirements would include provision of one off-street loading space for office use.

DISTINCTIVE ENVIRONMENTAL CHARACTERISTICS OF ALTERNATIVE

This alternative would restore the existing architecturally significant structures on Sutter St. (154 Sutter and 200 Kearny) which are part of the proposal Hallidie Building - Retail Historic District, and the 220 Kearny St. building, considered to have contextual importance. The existing Sutter St. streetscape would not be changed. Other impacts of this alternative would be similar to existing conditions, as discussed above in Alternative 1:

No-Project Alternative, p. 138. Tenant displacement effects, as a result of renovation, would be similar to those of the project. The alternative would include replacement of building features lost over time (as proposed for the project), including the mezzanine glazing, corner detail and canopy of 200 Kearny and the cornice of 154 Sutter.

VII. Alternatives to the Proposed Project

SPONSOR'S REASONS FOR REJECTION

This alternative was rejected by the project sponsor because it would not fully use the development potential that could be allowed at the site, and would not generate sufficient revenue to restore and preserve site buildings that do not meet current life safety and building codes.

C. ALTERNATIVE 2B: RETENTION OF THE BUILDINGS AT 200 KEARNY ST. AND 154 SUTTER ST., NEW CONSTRUCTION AT 220 KEARNY ST.

DESCRIPTION OF ALTERNATIVE

This alternative would restore the buildings at 200 Kearny St. and 154 Sutter St. as separate structures which would meet current Building Code and seismic safety standards. The building at 220 Kearny St. would be demolished and a 440 ft. tall office building would be built on this lot, with about 200,000 gross sq. ft. of floor area. Total floor area for this alternative would be about 280,000 gross sq. ft., including about 80,000 sq. ft. in the two restored structures. Leasable floor area would be about 25% less than that of the project, because of the space occupied by the service and elevator core in the 5,000 sq.-ft.-tower floors.

DISTINCTIVE ENVIRONMENTAL CHARACTERISTICS OF ALTERNATIVE

This alternative would retain the existing architecturally significant structures on Sutter St. The tower, located at 220 Kearny St., would be about 120 ft. taller than the proposed project. The alternative would cast longer shadows than the proposed project, but would not shade public open spaces. In general, shadows would overlap those cast by existing or approved buildings in the area. Wind effects would be similar to those of the project.

Other effects of the alternative would be reduced by about 25% in comparison with the proposed project because of its lower total leasable office space.

VII. Alternatives to the Proposed Project

SPONSOR'S REASONS FOR REJECTION

The project sponsor has rejected this alternative because it would result in project tower floor of less than 5,000 gross sq. ft. each that, in the sponsor's opinion, would not be marketable. (The smaller floor size would have a higher ratio of service and elevator and space to leasable space than the project.)

D. ALTERNATIVE 3: COMBINED OFFICE AND RESIDENTIAL USE, INTERIM CONTROLS

DESCRIPTION OF ALTERNATIVE

This alternative would consist of a structure that would contain the same gross floor area of office and retail use as the proposed project and would include additional floor area for residential use, as permitted under Interim Controls./1/ Use of a corner lot premium (allowable for housing) of about 42,000 gross sq. ft. would add four floors of about 10,000 sq. ft. each. These four floors would contain 42 condominium units.

Total gross floor area would be about 322,000 sq. ft. and overall height would be 354 ft., compared to 280,000 sq. ft. and 315 ft. for the project. The Planning Code would require a minimum of one parking space per four residential units, or 11 spaces, for the residential units. The alternative would include about 120 parking spaces, about the same as the proposed project.

The alternative would include two elevator cores, one for office use and one for residential use.

DISTINCTIVE ENVIRONMENTAL CHARACTERISTICS OF ALTERNATIVE

As with the proposed project, this alternative would preserve the street facades of 200 Kearny St. and 154 Sutter St. and demolish the building at 220 Kearny St. The greater height of the alternative would increase its visibility and would result in longer shadows. Shadows would generally overlap those cast by other existing buildings. Wind effects would be similar to those of the project.

VII. Alternatives to the Proposed Project

Forty-two condominium units, containing two bedrooms each, would partially mitigate the 120-unit net housing demand directly generated by the project (see Section IV. D., Environmental Impact, Employment, Housing, and Fiscal Factors, p. 85). (Under Office/Housing Production Program guidelines, the City Planning Commission could grant additional housing credits, based on the number of bedrooms per unit.) As the housing units would probably sell for at least \$300,000, residents would consist primarily of upper-income households of which the principal wage earner(s) would probably work Downtown, perhaps in the building itself.

Transportation effects of the office portion of this alternative would be similar to the effects of the proposed project. The residential portion of the alternative would generate approximately 335 vehicle-trip ends per day, and approximately 15% more person-trip ends per day than the project, with a more balanced (in terms of direction and time of day) travel pattern. Because the building residents could either walk to work in the Downtown, or commute out of the Downtown in the opposite direction of peak traffic, the overall impacts of this alternative on traffic, transit and parking demand (and associated fuel consumption, noise and air pollution levels) would probably be less than 15% higher than those of the proposed project.

The alternative would expose residents to the environmental conditions of the Downtown area, including greater levels of traffic, noise, and air pollution than are common in most outlying residential areas. These conditions are similar to those in nearby residential areas including Chinatown, North Beach and the Golden Gateway Center, all within three-quarters of a mile of the site. Grocery stores and other residential services in Chinatown and at the Golden Gateway Center would be available to residents of this alternative. A combined office-residential building has been approved at 333 Bush St., on the project block.

Fiscal implications of this alternative are difficult to project, but would probably be similar to those of the proposed project, as revenue gains attributable to a higher assessed project value (due, in turn to higher construction costs and reassessments of condominium units upon resale) could be partly offset by possible increased service costs attributable to the

VII. Alternatives to the Proposed Project

introduction of a residential use in a predominantly commercial/office/business area. For example, these service costs could include those for fire and police protection.

SPONSOR'S REASONS FOR REJECTION

The project sponsor has rejected this alternative because on-site housing would require additional entrances and service facilities that would reduce ground floor retail area and because the additional elevator core for residential uses would also result in about 500 sq. ft. less of net leasable office space per floor.

ALTERNATIVES CONFORMING TO GUIDING DOWNTOWN DEVELOPMENT

Alternatives 4A and 4B would be projects consistent with controls described in Guiding Downton Development (GDD), May 1981, and revised July 1982, a study prepared by the staff of the Department of City Planning. The City Planning Commission, in Resolution 8592, June 21, 1981, requested that the EIRs include alternatives conforming to GDD as a means of providing information and practical analysis of the effects of controls described in GDD. The following alternatives would conform to GDD:

E. ALTERNATIVE 4A: OFFICE PROJECT CONSISTENT WITH CONTROLS PROPOSED IN "GUIDING DOWNTOWN DEVELOPMENT", PRESERVATION OF 200 KEARNY AND 154 SUTTER

DESCRIPTION OF ALTERNATIVE

The planning study document, Guiding Downtown Development, (GDD, July 1982) proposes that Kearny St. frontages between Pine and Market, which function as part of the retail district, be redesignated from C-3-0 (Downtown Office) to C-3-R (Downtown Retail) and 120-E height and bulk district. The C-3-R district has a maximum FAR of 6:1. Maximum permitted height for the site under GDD would be 120 ft.; above 65 ft., maximum length would be 110 ft. and the maximum diagonal dimension would be 140 ft.

VII. Alternatives to the Proposed Project

GDD would require City Planning Commission conditional use approval for alterations or demolition of 200 Kearny St. and 154 Sutter St., buildings on the City's list of architecturally significant structures. If preservation of these two buildings were required, the GDD alternative would be similar to Alternative 2B, Preservation of 200 Kearny and 154 Sutter, with New Construction at 220 Kearny, except that the new building at 220 Kearny St. would be 120 ft. high, with about nine stories, rather than 315 ft. and 19 stories. Total floor area at the site would be about 115,000 gross sq. ft., about 60% less than the project. GDD would also allow a bonus of up to 50% of the private floor area and 100% of public floor area, either on the same site, or transferrable to another site in the C-3 area, for restoration of structures on the City's list of significant buildings. This would permit about 40,000 gross sq. ft. (50% of the floor area of the restored buildings) to be used in this manner. GDD-proposed height and bulk constraints on the project site would require that this bonus floor area be transferred to another C-3 site. (See Table 16, p. 145, for a comparison of existing City Planning Code requirements with the proposed GDD changes in those requirements).

GDD proposes that Hardie Place be a Commercial Recreation Street. Such streets are proposed to be developed with a pedestrian-oriented, sunlit environment. This alternative would provide retail frontage on Hardie Place; the alley would also provide access to off-street loading for the project and for the service entrance to 130 Sutter St. (Hallidie Building), east of the site.

This alternative would generate a net demand for 20 residential units, compared to 122 for the proposed project. Because of the GDD-proposed height and bulk limits, these units would be provided off-site.

DISTINCTIVE ENVIRONMENTAL CHARACTERISTICS OF ALTERNATIVE

This alternative would preserve buildings on the City's list of architecturally significant structures, and would maintain the existing Sutter St. streetscape. An additional 40,000 sq. ft. of development rights could be transferred to other sites in the C-3 districts (except where the use of these rights would result in the destruction of designated City Landmarks or other

TABLE 16: COMPARISON OF PROJECT WITH GUIDING DOWNTOWN DEVELOPMENT ALTERNATIVE 4A

Major Development Controls Pertaining to Project Site	Proposed Project	Proposed Requirements in Guiding Downtown Development	Alternative 4A
Base FAR	14:1	6:1*(Redesignated as C-3-R)	6:1
Height Limit	315 ft.	120 ft.**	120 ft.
Average Area per Floor	14,000 sq. ft.	120-E Height and Bulk District; above 65 ft., maximum building length would be 110 ft.; maximum diagonal 140 ft.	
Maximum Diagonal Length	166 ft.		Would meet criteria
Incorporation of Art	None proposed	Art equal to 1% of total construction costs.	Art would be incorporated
Ground-floor retail	10,000 sq. ft.	Can be required; would count as part of FAR in C-3-R district	About 10,000 sq. ft.
Recreation/Open space	9,800 sq. ft.	1 sq. ft. for public use per 40 sq. ft. of gross floor area	3,000 sq. ft.
Off-street loading	Two spaces	0.1 spaces per 10,000 sq. ft. of gross floor area for buildings containing more than 100,000 ft.	One space
Long-term Parking	43 spaces	None permitted for office uses	None
Provision of Housing	Off-site	640 sq. ft. per 1,000 sq. ft. of office space (about 20 units for the alternative).	Off-site

* Additional FAR allowable for provision of housing (3:1), except on sites containing architecturally significant buildings.

SOURCE: City Planning Code; Guiding Downtown Development, July 1982; Skidmore, Owings and Merrill; Environmental Science Associates, Inc.

VII. Alternatives to the Proposed Project

buildings in the GDD list of architecturally significant buildings in the Downtown). Further environmental analysis would be required for specific effects on the site(s) to which development rights were transferred; cumulative effects would occur from development of a total of about 160,000 gross sq. ft. in the Downtown.

Visibility of the alternative and shadow effects would generally be similar that of existing site buildings, except that the new 120-ft. building at 220 Kearny St. would be more visible than the existing four-story 220 Kearny building.

This alternative would contain about 115,000 gross sq. ft. of office space, about 165,000 sq. ft. less than the project. This space would provide employment for about 500 persons, about 600 fewer than the proposed project, and compared to about 610 employees now employed at the site. Transportation effects would be similar to existing conditions, as would effects on energy, noise and air pollution. Fiscal effects of this alternative would be similar to current site conditions.

SPONSOR'S REASON FOR REJECTION

The project sponsor has rejected this alternative because it would not allow development of the floor area permitted by present planning controls.

F. ALTERNATIVE 4B: OFFICE PROJECT CONSISTENT WITH CONTROLS PROPOSED IN "GUIDING DOWNTOWN DEVELOPMENT", DEMOLITION OF SITE BUILDINGS

DESCRIPTION OF ALTERNATIVE

This alternative would demolish all site buildings and develop a new office building with a gross floor area of 120,400 sq. ft., at a basic FAR of 6:1. A 120-ft. building on the project site with setbacks at upper floors would meet 120-E height and bulk district requirements (see Figure 32, p. 148). Demolition of 200 Kearny and 154 Sutter, on the GDD list of architecturally significant buildings, would require Planning Commission conditional use approval under proposed GDD controls

VII. Alternatives to the Proposed Project

This alternative would have one off-street loading space, consistent with the GDD requirement of .1 space per 10,000 sq. ft. of office floor area, rounded to the nearest whole space. No off-street loading would be required for 10,000 gross sq. ft. of retail space. GDD would require public recreation or open space in a ratio of 1:40 to total building area, or 3,000 sq. ft. This would be provided in rooftop terraces.

DISTINCTIVE ENVIRONMENTAL CHARACTERISTICS OF ALTERNATIVE

This alternative would demolish all site buildings, which are considered architecturally significant or of contextual architectural importance. This alternative would shade the northern portion of Hardie Place during midday in summer (The southern portion is already shaded). It would maintain other existing sunlight and shadow conditions on Hardie Place (see Section IV., C., pp. 81-84).

Effects of this alternative related to employment and transportation would be similar to GDD Alternative 4A, discussed above.

SPONSOR'S REASON FOR REJECTION

The project sponsor has rejected this alternative because it would not allow development of full floor area permitted by present planning controls.

G. ALTERNATIVE 5: NO ON-SITE PARKING

DESCRIPTION OF ALTERNATIVE

This alternative would be the same as the proposed project, except that 123 basement-level parking spaces would not be provided.

DISTINCTIVE ENVIRONMENTAL CHARACTERISTICS OF ALTERNATIVE

This alternative would be consistent with policies of the Transportation Element of the San Francisco Comprehensive Plan that discourage new parking in the Downtown core. The Planning Code does not require provision of parking

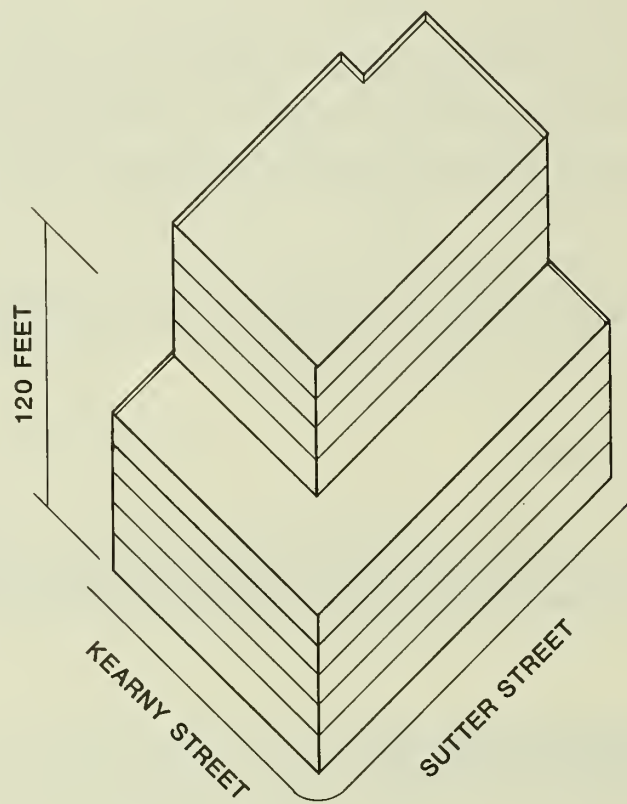


FIGURE 32: Alternative 4B –
Guiding Downtown Development

SOURCE: Skidmore, Owings & Merrill

VII. Alternatives to the Proposed Project

for other than residential use in the C-3-0 district. It would increase the cumulative off-street long-term parking space deficit (to 1990) in the Downtown area by about 120 spaces (assuming all project spaces were to be used for long-term parking; the allocation of proposed project parking between long-term or short-term use has not been determined.). The alternative would also reduce vehicle-pedestrian conflicts at Hardie Place and Kearny St.

This alternative would not change the Levels of Service for the Sutter and Kearny, Sutter and Montgomery, and Bush and Kearny intersections, nor would the pedestrian service levels deteriorate. Additional transit trips might be generated, although they would not represent a substantial increase on any of the carriers. Without the ramp into the basement proposed in the project, there would be more space on the ground level which could be used as loading area or as retail space.

SPONSOR'S REASONS FOR REJECTION

The project sponsor has rejected this alternative because the lack of on-site parking might affect the sponsor's ability to find tenants requiring parking for tenant visitors, sales and field personnel, and because the proposed parking would help meet the projected parking deficit in the Downtown area, partially caused by this project.

H. ALTERNATIVE 6: ALTERNATIVE PROJECT DESIGN

DESCRIPTION OF ALTERNATIVE

This alternative would have the same total floor as the project, with a revised tower design (see Figure 33, p. 150). As with the project, the alternative would preserve the facades of 200 Kearny St. and 154 Sutter St., with new interior construction. The L-shaped tower of this alternative would be set back completely from the roof of 200 Kearny St. Above the 154 Sutter St. facade, the tower would be set back in a series of steps; the first setback from Sutter St. would be about 12 ft. On the Kearny St. frontage, there would be a projecting cornice above the seventh floor. Overall height would be 305 ft., compared to 315 ft. for the project.



FIGURE 33: Alternative 6

SOURCE: Skidmore, Owings & Merrill

VII. Alternatives to the Proposed Project

DISTINCTIVE ENVIRONMENTAL CHARACTERISTICS OF ALTERNATIVE

The alternative would maintain the existing scale and character of the 200 Kearny St. building, on the City's list of architecturally significant buildings, and part of the City-proposed Hallidie Building - Retail Historic District. The stepped-back tower above the 154 Sutter St. building would add a new high-rise element on this portion of Sutter St. that would alter the existing transition of building heights on the south frontage of the project block. The setbacks are intended to relate to the variety of building heights on the north side of Sutter St. As with the project, the alternative would introduce a new high-rise element on Kearny St.; the projecting cornice is intended to relate the project to existing mid-scale buildings on Kearny St.

Because the height and bulk of this alternative would be similar to those of the project, shadow and wind effects would be similar. Economic, housing, and transportation effects would also be similar, since total square footage and expected employment for this alternative would be the same as the proposed project.

UNDER CONSIDERATION BY PROJECT SPONSOR

The project sponsor is considering this alternative in the belief that the positive effects of maintaining the existing scale of the 200 Kearney St. building and of providing the setbacks above the 154 Sutter St. frontage of the site would outweigh the fact that the tower design for this alternative would have less efficient floor sizes and configurations than the project.

NOTE - Alternatives

/1/ City Planning Commission Resolution No. 8474, January 17, 1980 and Board of Supervisor Ordinance 240-80, June 1, 1980 established interim limitations on floor area bonuses, until September 1, 1983. Bonus floor area is still permitted as a conditional use for residential purposes only.

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DEPARTMENT OF CITY PLANNING

100 LARKIN STREET - SAN FRANCISCO, CALIFORNIA 94102

(415) 552-1134

NOTICE THAT AN ENVIRONMENTAL IMPACT REPORT IS DETERMINED TO BE REQUIRED

Date of this Notice: April 30, 1982

Lead Agency: City and County of San Francisco, Department of City Planning
100 Larkin Street, San Francisco, CA. 94102

Agency Contact Person: Carol Roos

Tel: (415) 552-1134

Project Title: 81.687E: 222 Kearny
Street Building

Project Sponsor: Lincoln Property Company

Project Contact Person: Carl Danielson

Project Address: 222 Kearny Street Northwest corner of Sutter and Kearny Streets.

Assessor's Block(s) and Lot(s): Lots 10, 11 and 29 in Assessor's Block 288

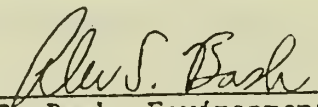
City and County: San Francisco

Project Description: Demolition of the 4 - story building at 220 Kearny Street; retention of the facades of the 6 - story building at 154 Sutter and the 5 - Story Adams Building at 200 Kearny; and construction of a 288 - foot - tall, 19 - story, approximately 280,000 - gross - square foot office building with about 10,000 gross square feet of commercial space, 43 parking spaces and three loading spaces. Requiring Discretionary Review by the City Planning Commission, and applicable demolition and building permits.

THIS PROJECT MAY HAVE A SIGNIFICANT EFFECT ON THE ENVIRONMENT AND AN ENVIRONMENTAL IMPACT REPORT IS REQUIRED. This determination is based upon the criteria of the Guidelines of the State Secretary for Resources, Sections 15081 (Determining Significant Effect), 15082 (Mandatory Findings of Significance) and 15084 (Decision to Prepare an EIR), and the following reasons, as documented in the Environmental Evaluation (Initial Study) for the project, which is attached.

Deadline for Filing of an Appeal of this Determination to the City Planning Commission: May 10, 1982.

An appeal requires 1) a letter specifying the grounds for the appeal, and 2) a \$25.00 filing fee.


Alec S. Bash, Environmental Review Officer



DEPARTMENT OF CITY PLANNING

100 LARKIN STREET | SAN FRANCISCO, CALIFORNIA 94102

FINAL
INITIAL STUDY

222 KEARNY STREET
OFFICE BUILDING
SAN FRANCISCO

81.687E

April 1982

222 KEARNY STREET

INITIAL STUDY

81.687E

PROJECT DESCRIPTION

Lincoln Property Company proposes to construct a 19-story office building with street-level retail uses on a 19,955-sq.-ft. site at the northeast corner of the intersection of Sutter and Kearny Sts. on the block bounded by Sutter, Kearny, Bush, and Montgomery Sts. (see Figure 1). The site has frontages of about 170 ft. along Sutter St. and about 120 ft. along Kearny St. The site, Lots 10, 11, and 29 in Assessor's Block 288 (see Figure 2), is in the C-3-0 (Downtown Office) Use District and 500-I Height and Bulk District; permitted floor area ratio (FAR) for the site is 14:1. Lot 10 at 200 Kearny St., and Lot 11 at 220 Kearny St., are occupied by a five-story structure and a four-story structure, respectively. Lot 29, at 154 Sutter St., is occupied by a six-story structure. Buildings at 200 Kearny St. and 154 Sutter St. are included in the list of architecturally and/or historically significant buildings adopted by City Planning Commission Resolution No. 8600.

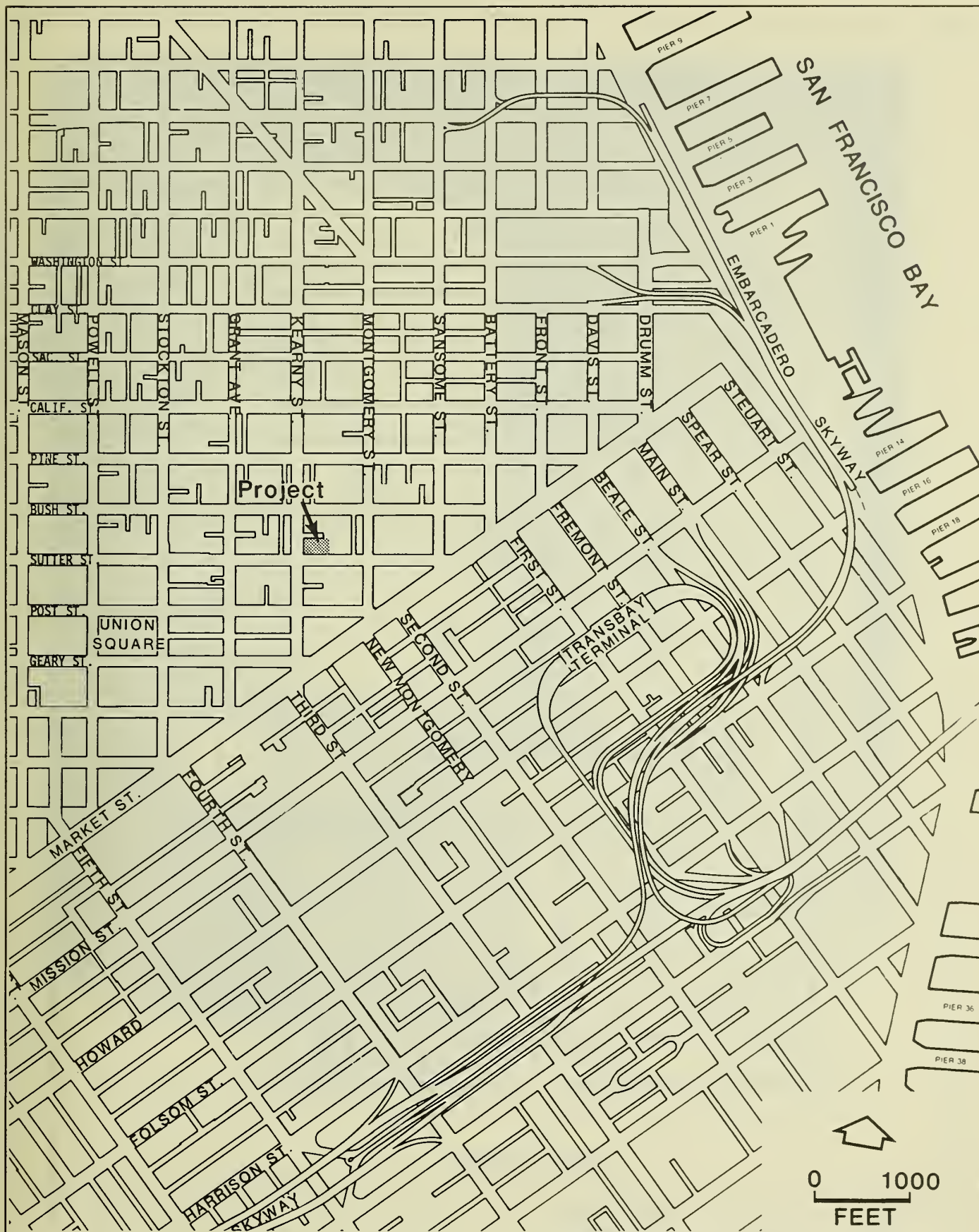
The project would be a 288-ft.-high, 19-story office building (including one mechanical floor), with total floor area of about 280,000 gross sq.ft. The street level would include 10,000 gross sq.ft. of retail space fronting on Sutter and Kearny Sts. Office space would total 270,000 sq.ft. on 18 levels. One basement level would contain 43 parking spaces. Three off-street loading docks would have access from Hardie Place.

A four-story structure at 220 Kearny St. would be demolished. Exteriors of the five-story 200 Kearny St. building and the six-story 154 Sutter St. building would be restored and preserved, and a new five- to six-story base and interior structures would be constructed and integrated with the restored exteriors. The office tower of the new building would be a 13-story structure (above the base) set back from Sutter St. (see Figure 3).

SUMMARY OF POTENTIAL ENVIRONMENTAL EFFECTS

EFFECTS FOUND TO BE POTENTIALLY SIGNIFICANT

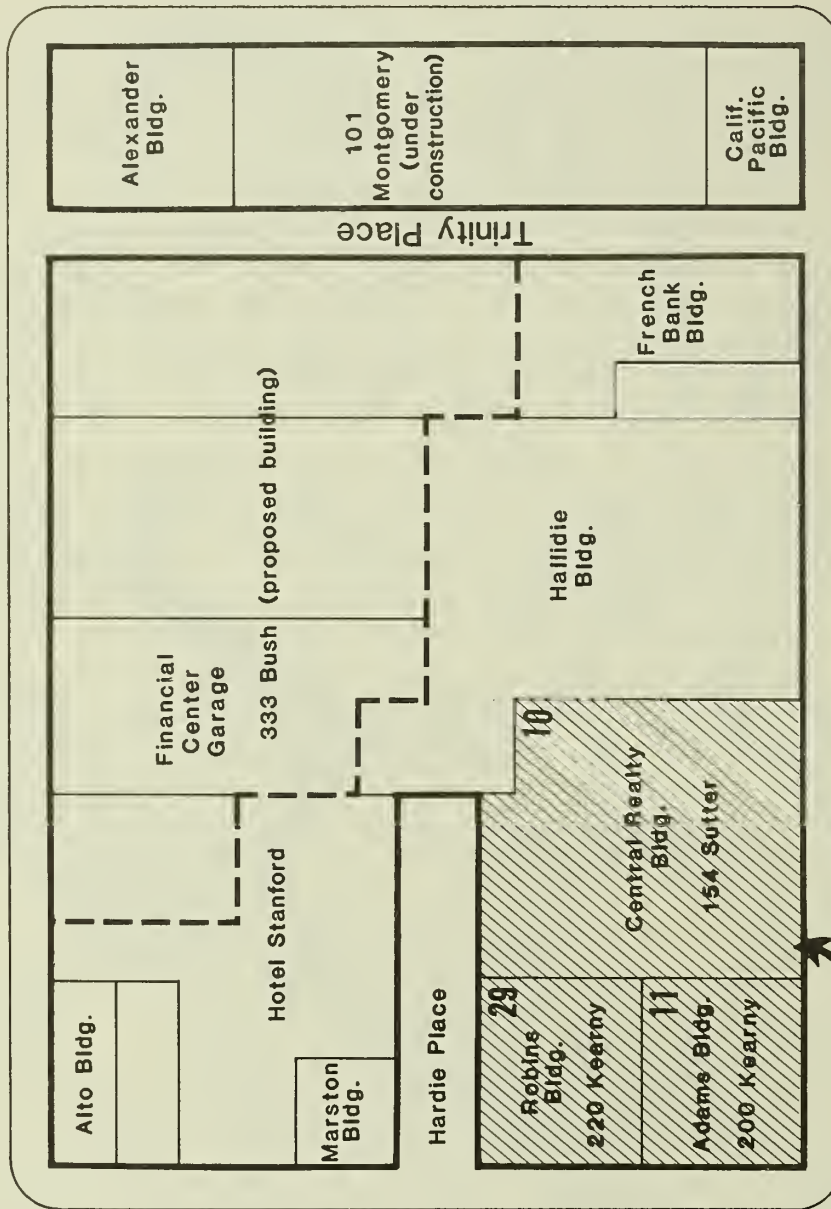
The 222 Kearny St. project is examined in this Initial Study to identify its potential effects on the environment. Some effects were determined to be potentially significant. Potential impacts which require further analysis in an EIR include transportation including parking, transit and circulation and construction of a long-term parking facility; effects of demolition or partial demolition of three buildings of architectural interest; wind and shadow effects; land use; urban design; cumulative air quality effects; construction noise; energy demand; and housing demand.



SOURCE: Environmental Science Associates, Inc.

FIGURE 1: Project Location

Bush Street



Montgomery Street

Kearny Street

Site

Sutter Street



FIGURE 2: Project Block
(Assessor's Block No. 288)

SOURCE: Environmental Science Associates, Inc.



FIGURE 3:
View of Project Model Looking
Northeast from Sutter and
Kearny Streets

SOURCE: Skidmore, Owings and Merrill

EFFECTS FOUND NOT TO BE SIGNIFICANT

Some potential environmental effects would either be insignificant or would be mitigated through measures incorporated into the project design. These require no further environmental analysis. They include:

Noise: After completion, project operation would not perceptibly increase noise levels in the project vicinity. Operational noise would be regulated by, and the project would comply with, the San Francisco Noise Ordinance (Part II, Chapter VII, San Francisco Municipal Code) and the project would include noise insulation measures contained in the Noise Guidelines of the San Francisco Comprehensive Plan.

Public Services and Utilities: Increased demand for public services and utilities attributable to the project would not require additional personnel or equipment.

Biology: The project would have negligible effect on plant or animal life, as the site is totally occupied by structures.

Land (topography, soils, geology)/Water: The project would be supported by deep spread footings; pile driving is not anticipated. Underlying materials would provide adequate foundation support and seismic stability. Existing basements on the site would reduce excavation requirements. No dewatering appears necessary.

Hazards: The site and the project would neither cause nor be affected by hazardous uses or health hazards. Impact on the City's emergency response plan will not be discussed in the EIR because of mitigation measures to be implemented by the project sponsor to insure coordination with the City's emergency planning activities.

Cultural Resources: No significant subsurface resources are expected to be encountered during construction. This topic will not be discussed in the EIR because of mitigation measures to be implemented by the project sponsor to protect any potential resources.

A. GENERAL CONSIDERATIONS

	<u>Yes</u>	<u>Maybe</u>	<u>No</u>	<u>N/A</u>	<u>Disc.</u>
1. Would the project conflict with objectives and policies in the Comprehensive Plan (Master Plan) of the City?	<u> </u>	<u> X </u>	<u> </u>	<u> </u>	<u> X </u>
2. Would the project require a variance, or other special authorization under the City Planning Code?	<u> X </u>	<u> </u>	<u> </u>	<u> </u>	<u> X </u>
3. Would the project require approval of permits from City Departments other than DCP or BBI, or from Regional, State or Federal agencies?	<u> </u>	<u> </u>	<u> X </u>	<u> </u>	<u> </u>
4. Would the project conflict with adopted environmental plans and goals?	<u> X </u>	<u> </u>	<u> </u>	<u> </u>	<u> X </u>

The project would be consistent with some objectives of the Comprehensive Plan. It would provide office space in the Downtown Office District (C-3-0), which is described in the City Planning Code as "playing a leading national role in finance, corporate headquarters and service industries, and serving as an employment center for the region."

The project would be consistent with Objective 6 of the Commerce and Industry Element of the Comprehensive Plan to "maintain and improve San Francisco's position as a prime location for financial administrative, corporate, and professional activity," and Policy 4 of Objective 6 to "maintain a compact downtown core."

The street level of the project would retain retail uses. This would be consistent with Policy 3 of Objective 7 in the Comprehensive Plan to "design amenities at a pedestrian scale which will enhance the pedestrian environment" and Policy 4 of Objective 6 "to provide adequate amenities for those who live, work and use downtown." However, some retail uses would be displaced by the project and net retail space at the site may be reduced.

The project tower would be set back. This would be responsive to Policies for New Development, Policy 5, of the Urban Design Element of the Comprehensive Plan in attempting to relate "the bulk of buildings to the prevailing scale of development to avoid an overwhelming or dominating appearance in new construction." The project would restore and preserve the exteriors of 200 Kearny St. and 154 Sutter St. This is intended to be consistent with Policies for Conservation, Policy 4, of the Urban Design Element, to "preserve notable landmarks and areas of historical, architectural or aesthetic value . . ."

The project may not be consistent with Objective 1, Policy 4 of the Downtown Transportation Plan which "discourages the addition of new long-term parking spaces in and around downtown." The project basement would provide 43 parking spaces. There is no long-term parking currently provided at the site.

The project would be within two blocks of the Montgomery St. subway station which is served by BART and Muni Metro rail transit lines. The project would be directly accessible by, or close to, bus lines serving San Francisco (Muni), Marin (Golden Gate Transit), the East Bay (AC Transit) and the Peninsula (SamTrans and Muni connections to Southern Pacific rail commuter service), thereby encouraging use of public transit. This would be consistent with Objective 1, Policy 10 of the Downtown Transportation Plan, stating that private automobile traffic "must be reduced" and that "land use development and transportation services should be coordinated in a manner to maximize efficiency and minimize cost while preserving and strengthening the downtown environment." The off-street loading provided in the project would respond to Objective 11, Policy 4 of the Citywide Parking Plan which encourages off-street loading facilities.

The project would require discretionary review by the City Planning Commission under Resolution No. 8474, which requires review of all projects in the Downtown (C-3 Use Districts) area.

Impacts of the project on architectural resources are discussed on p. 23 in the Cultural Resources section.

B. ENVIRONMENTAL IMPACTS

1. <u>Land Use.</u> Would the proposed project:	<u>Yes</u>	<u>Maybe</u>	<u>No</u>	<u>N/A</u>	<u>Disc.</u>
a. Be different from surrounding land uses?	---	X	---	---	X
b. Disrupt or divide the physical arrangement of an established community?	---	X	---	---	X

The project site is surrounded by office and retail uses. Buildings on the project block generally have office space above street-level retail uses and range from four to ten stories. Exceptions include the six-story Hotel Stanford, immediately north of the site, and the 28-story office building under construction at 101 Montgomery St. A 37-story mixed-use office/housing tower is proposed on the Bush St. frontage of the project block.

The site is at the western edge of the Financial district with highrises generally on the east, north and south, and the downtown retail core adjacent to the site along Kearny St. and spreading generally to the west. The effects of the project regarding land use compatibility require further study in the project EIR.

2. <u>Visual Quality and Urban Design.</u> Would the proposed project:	<u>Yes</u>	<u>Maybe</u>	<u>No</u>	<u>N/A</u>	<u>Disc.</u>
a. Obstruct or degrade any scenic view or vista open to the public?	---	---	X	---	X
b. Reduce or obstruct views from adjacent or nearby buildings?	X	---	---	---	X

	<u>Yes</u>	<u>Maybe</u>	<u>No</u>	<u>N/A</u>	<u>Disc.</u>
c. Create a negative aesthetic effect?	<u>---</u>	<u>X</u>	<u>---</u>	<u>---</u>	<u>X</u>
d. Generate light or glare affecting other properties?	<u>---</u>	<u>---</u>	<u>X</u>	<u>---</u>	<u>X</u>

The proposed project would not obstruct any major scenic view or vista now available to the public. Views along the Sutter St. and Kearny St. corridors may be changed; views along the Montgomery St. corridor would not be affected. Views across the site from the upper floors of the Hotel Stanford, Sutter Hotel, and Crocker Center (under construction) would be affected. Additional study of the effect of the project on both long- and short-range views will be included in the project EIR.

Existing four- to six-story buildings would be replaced with an 18-story structure. The exterior of the new structure would be intended to be compatible with the adjacent Hallidie Building. (The Hallidie Building is on the City's list of architecturally and/or historically significant buildings and listed on the National Register of Historic Places.) Effects on visual quality and urban design will be discussed in the project EIR.

The project would contain no reflective glass or high-intensity lighting and hence would not impose a reflective or glaring light on other properties. This topic will not be discussed in the EIR.

3. Population/Employment/Housing.

<u>Would the proposed project:</u>	<u>Yes</u>	<u>Maybe</u>	<u>No</u>	<u>N/A</u>	<u>Disc.</u>
a. Alter the density of the area employment population?	<u>X</u>	<u>---</u>	<u>---</u>	<u>---</u>	<u>X</u>
b. Have a growth-inducing effect?	<u>X</u>	<u>---</u>	<u>---</u>	<u>---</u>	<u>X</u>
c. Require relocation of housing or businesses, with a displacement of people, in order to clear the site?	<u>X</u>	<u>---</u>	<u>---</u>	<u>---</u>	<u>X</u>
d. Create or eliminate jobs during construction, operation or maintenance of the project?	<u>X</u>	<u>---</u>	<u>---</u>	<u>---</u>	<u>X</u>
e. Create an additional demand for housing in San Francisco?	<u>---</u>	<u>X</u>	<u>---</u>	<u>---</u>	<u>X</u>

Approximately 635 people currently work at the project site. About 550 of these people are employed by Dean Witter Reynolds which will move its office to the 101 California St. building scheduled for completion in 1983. Other current occupants include about 50 retail workers; these would be displaced by the project. No housing would be displaced.

Relocation plans for current retail tenants are unknown at this time; they may relocate elsewhere or return to the site after project completion. The project sponsor would offer current tenants the right of "first-refusal" of space in the new building at then applicable rental rates. Tenant displacement effects will be discussed in the project EIR.

The number of workers employed during project construction will also be estimated in the EIR. After project completion, approximately 1,100 people (1070 office employees and 30 retail employees) would work at the site./1/ This would represent a net increase of about 465 persons. If new employment opportunities are located in the project, it may attract new residents to San Francisco or other parts of the Bay Area. Potential housing demand and growth-inducing effects of the project will be discussed in the project EIR.

NOTE - Population/Employment/Housing

/1/ Number of on-site employees estimated at the rates of one employee per 250 sq.ft. of office space, and one employee per 400 sq.ft. of retail space. Source: California Office of Planning and Research, January 1978, Economic Practices Manual, pp. 35-37.

4. Transportation/Circulation.

Would the construction or operation of the project result in:

	<u>Yes</u>	<u>Maybe</u>	<u>No</u>	<u>N/A</u>	<u>Disc.</u>
a. Change in use of existing transportation systems? (transit, roadways, pedestrian ways, etc.)	<u>X</u>	<u>---</u>	<u>---</u>	<u>---</u>	<u>X</u>
b. An increase in traffic which is substantial in relation to existing loads and street capacity?	<u>---</u>	<u>X</u>	<u>---</u>	<u>---</u>	<u>X</u>
c. Effects on existing parking facilities, or demand for new parking?	<u>X</u>	<u>---</u>	<u>---</u>	<u>---</u>	<u>X</u>
d. Alteration to current patterns of circulation or movement of people and/or goods?	<u>X</u>	<u>---</u>	<u>---</u>	<u>---</u>	<u>X</u>
e. Increase in traffic hazards to motor vehicles, bicyclists or pedestrians?	<u>---</u>	<u>X</u>	<u>---</u>	<u>---</u>	<u>X</u>
f. A need for maintenance or improvement or change in configuration of existing public roads or facilities?	<u>---</u>	<u>---</u>	<u>X</u>	<u>---</u>	<u>X</u>
g. Construction of new public roads?	<u>---</u>	<u>---</u>	<u>X</u>	<u>---</u>	<u>---</u>

The project would increase Muni and regional transit patronage and may attract additional automobile trips to the site and the Downtown area. Pedestrian use of sidewalks may increase and access to basement-level parking and truck loading on Hardie Place may result in increased potential for pedestrian and vehicle conflicts. Both project-related and cumulative impacts on transit and traffic will be evaluated in the project EIR.

No existing parking spaces would be eliminated as a result of the project; 43 parking spaces would be provided in the project. Effects of the project and cumulative downtown development on long- and short-term parking require analysis in the project EIR.

5. Noise.

	<u>Yes</u>	<u>Maybe</u>	<u>No</u>	<u>N/A</u>	<u>Disc.</u>
a. Would the proposed project result in generation of noise levels in excess of those currently existing in the area? (During construction)	<u>X</u>	<u>---</u>	<u>---</u>	<u>---</u>	<u>X</u>
b. Would existing noise levels impact the proposed use?	<u>---</u>	<u>---</u>	<u>X</u>	<u>---</u>	<u>X</u>
c. Are Title 25 Noise Insulation Standards applicable?	<u>---</u>	<u>---</u>	<u>X</u>	<u>---</u>	<u>X</u>

Project Construction

Project construction would require approximately 24 months and would involve demolition of some existing buildings, some excavation, and construction of the project. These activities would temporarily cause noise levels to exceed those existing in the site vicinity. A spread footing foundation would probably be used, and no pile driving is anticipated.

The project contractor would comply with all requirements of the San Francisco Noise Ordinance (Part II, Chapter VII, San Francisco Municipal Code), including limiting noise emissions from powered construction equipment to 80 dBA at a distance of 100 ft. The project contractor would muffle and shield intakes and exhausts, shroud or shield impact tools, and use electric-powered rather than diesel-powered construction equipment, as feasible. Adherence to this limit would ensure that all equipment would cause noise levels at the nearest building to be no greater than present maximum noise levels due to traffic and other mechanical equipment. Impact tools typically do not comply with provisions of Section 2907 of the Noise Ordinance. If it is necessary to use these tools for pile driving, a limitation on the hours of use may be required under the ordinance. Further consideration will be given to this issue in the project EIR, including construction noise effects on workers and residents in the site vicinity.

Trucking of construction material to and from the site would not cause a noticeable increase in average noise levels along haul routes because of existing traffic noise levels of about 75 dBA on the street./1,2/ These noise effects will not be discussed in the EIR.

Project Operation

Noise levels in the vicinity of the project would not increase noticeably due to project operation. Traffic generated by the project during any hour of the day would cause traffic noise levels to increase by less than 1 dBA./1/ Loading dock deliveries and basement parking would generate traffic on nearby streets and on Hardie Place, but increased noise levels would be imperceptible due to existing noise levels on Kearny and Sutter Sts.

Project mechanical equipment noise would be regulated by the San Francisco Noise Ordinance, Section 2909, "Fixed Source Noise Level." In the C-3-0 Use District, the ordinance limits equipment noise levels to 70 dBA between 7 a.m. and 10 p.m. and 60 dBA between the hours of 10 p.m. and 7 a.m. at the receiver's property line. During lulls in traffic, mechanical equipment generating 70 dBA could dominate the site noise environment. As equipment noise levels would be limited to 60 dBA to meet the nighttime limit, they would not be perceptible within the sound-level context of the project. Discussion of operational noise will not be included in the project EIR.

As is typical of downtown San Francisco, the noise environment of the site is dominated by vehicular traffic noise. The Environmental Protection Element of the San Francisco Comprehensive Plan indicates a day-night average noise level (Ldn) of 75 dBA on Sutter St. in 1974./3/ The Environmental Protection Element contains guidelines for determining the compatibility of various land uses with different noise environments. For office uses, the guidelines recommend no special noise control measures in an exterior noise environment up to an Ldn of 70 dBA. Exterior noise levels at the site are estimated to be 70 to 75 dBA. For these noise levels, the guidelines recommend an analysis of noise reduction requirements and inclusion of noise insulation features in the building design. As this would be done by the project sponsor, no further analysis is needed in the project EIR.

NOTES - Noise

/1/ dBA is the measurement of sound units of decibels (dB). The "A" denotes the A-weighted scale which simulates the response of the human ear to various frequencies of sound.

/2/ Environmental Protection Element, San Francisco Comprehensive Plan, 1974.

/3/ Ldn, the day-night average noise level, is a noise measurement based on human reaction to cumulative noise exposure over a 24-hour period, taking into account the greater annoyance of nighttime noises (noise between 10 p.m. and 7 a.m. is weighted 10 dBA higher than daytime noise).

6. Air Quality/Climate. Would the proposed project result in:

	<u>Yes</u>	<u>Maybe</u>	<u>No</u>	<u>N/A</u>	<u>Disc.</u>
a. Violation of any ambient air quality standard or contribution to an existing air quality violation?	___	<u>X</u>	___	___	<u>X</u>
b. Exposure of sensitive receptors to air pollutants?	___	<u>X</u>	___	___	<u>X</u>
c. Creation of objectionable odors?	___	___	<u>X</u>	___	___
d. Burning of any materials including brush, trees, or construction materials?	___	___	<u>X</u>	___	___
e. Alteration of wind, moisture, or temperature (including sun shading effects), or any change in climate, either locally or regionally?	<u>X</u>	___	___	___	<u>X</u>

Concentrations of air pollutants are monitored by the Bay Area Air Quality Management District (BAAQMD) at 900 23rd St., about two miles south of the site. Prior to 1980, a monitoring station was located at Van Ness Ave. and Ellis St., about 1.2 miles west of the proposed site. Air quality data collected by the BAAQMD at both locations show that San Francisco experiences infrequent excesses of the ambient air quality standards for ozone, carbon monoxide, and total suspended particulate (TSP).

Two types of air quality impacts could be expected from this project: short-term impacts from construction activity, and long-term impacts related to use and operation of the structure. Climatic conditions in downtown San Francisco allow rapid dispersal of air pollutants, so local stationary sources of emissions rarely create a measurable impact at monitoring stations. Rather, their impact is to add to regional accumulations of pollutants. Thus, the project would probably not result in direct violation of any ambient air quality standard, although it would contribute cumulatively to such excesses. The cumulative effects of this and other proposed projects in the project area will be discussed in the project EIR.

Project Construction

Demolition, excavation, and construction activities would affect local air quality for approximately 24 months. Grading and other construction activities would cause a temporary increase in particulate and hydrocarbon emissions. These emissions would be carried by prevailing winds and probably would not cause emissions standards to be violated at the monitoring station. Without mitigation, construction-generated dust might cause excesses of the particulate standard in the immediate project area. Dustfall may occur on surfaces within 200 to 800 ft. of the project site under low winds. Blowing dust may be an annoyance in the vicinity of the site when winds exceed 12 miles per hour. Construction dust is composed primarily of large particles that settle out of the atmosphere rapidly with increasing distance from the

source. Thus, it is more of a nuisance than a health hazard, except to sensitive receptors such as pedestrians and any occupants of nearby hotels who may have respiratory ailments.

Diesel-powered construction equipment would emit, in decreasing order by weight, nitrogen oxides, carbon monoxide, sulfur oxides, hydrocarbons, and particulates. This would increase local concentrations temporarily but would not be expected to increase the frequency of excesses of air quality standards. Pouring asphalt and applying certain architectural coatings would release hydrocarbons./1/ Although ambient concentrations of these pollutants would be increased for the duration of the construction period, no increases in measured concentrations at the 23rd St. monitoring station are expected to occur.

The project sponsor has agreed to the mitigation measures listed on p. 25; therefore, construction air quality impacts will not be discussed in the project EIR.

Project Operation

Project operation and related activities, such as project-generated traffic, would incrementally degrade air quality and impede regional efforts to attain and maintain air quality standards. Combustion of natural gas for space and water heating would generate small amounts of pollutants in the project area. Electrical energy consumption would place an increased demand on local generation plants, possibly resulting in greater emissions from these facilities. Further analysis is necessary to determine the effect of project operation on local concentrations of carbon monoxide, regional emissions of pollutants, and on the frequency of excesses of the standards; this will be discussed in the EIR.

The project may affect wind speed ratios at street level and cast new shadows on surrounding streets and open space. Wind and shadow effects will be addressed in the project EIR.

NOTE - Air Quality/Climate

/1/ Based on U.S. Environmental Protection Agency, Compilation of Pollutant Emission Factors AP-42 p. 11.2.4.1.

7. Utilities and Public Services.

Would the proposed project:

	<u>Yes</u>	<u>Maybe</u>	<u>No</u>	<u>N/A</u>	<u>Disc.</u>
Have an effect upon, or result in a need for new or altered, governmental services in any of the following?					
fire protection	—	—	X	—	X
police protection	—	—	X	—	X
schools	—	—	X	—	—
parks or other recreational facilities	—	—	X	—	X
maintenance of public facilities	—	—	X	—	—
power or natural gas	—	—	X	—	X
communications systems	—	—	X	—	X
water	—	—	X	—	X
sewer/storm water drainage	—	—	X	—	X
solid waste collection and disposal	—	—	X	—	X

Fire protection: The project would increase building area and the number of persons using the site. This would not substantially increase the fire hazard at the site as the project would incorporate extensive fire protection measures to comply with current building and fire code standards. Existing buildings do not meet current code requirements./1/

Fire protection impacts from cumulative downtown development are discussed in San Francisco Federal Savings and Loan Headquarters Draft Environmental Impact Report, EE 80.339, pp. 36 - 38; this document is available at the Office of Environmental Review, 45 Hyde Street, Rm. 319, San Francisco, California. The report concludes that cumulative downtown development would not effect overall fire protection service in San Francisco.

Police protection: The project would increase population and property on the site, thus increasing the potential for crime. The project would not require additional police personnel or equipment./2/ Appropriate security measures (alarms, adequate lighting at entryways, security personnel, closed-circuit camera systems) would reduce the effects of the project on the police department. No further analysis is necessary in the project EIR.

Parks or other recreational facilities: The project would generate a demand for urban recreational facilities, such as plazas and city parks. Union Square is three blocks west of the project site and St. Mary's Square is three blocks north. Crocker Center, under construction at Montgomery and Post Sts., would include a public roof-top plaza.

Power or natural gas: Project implementation would result in an increase in the use of gas and electricity on the site. There would be no supply or capacity problems in supplying these utilities for the project./3/

Communications systems: Pacific Telephone can provide the increased service capacity which would be required for the project./4/

Water: The project would result in a net increase in water use at the site of about 25,000 gallons per day (gpd). Existing mains in Sutter St. have existing capacity and pressure to handle the additional demand./5/

Sewer/storm water drainage: The amount of wastewater generated would be approximately the same as the water used, 25,000 gpd. Sewer mains located in Kearny and Sutter Sts. would be adequate to handle increased sewer flows as well as storm drainage./6/

Solid waste collection and disposal: The project would generate a net increase in solid waste. Collection facilities are adequate to meet the increased demand./7/

Disposal of municipal solid wastes presently occurs at a landfill site in Mountain View. The contract with this facility expires in October 1983. The City is presently negotiating with other landfill sites to accept San Francisco's solid waste on an interim basis until a solid waste program is implemented in late 1986. The solid waste program would consist of intensified recycling, a resource recovery project generating electricity from the burning of solid wastes, and landfill disposal of bypass and residue wastes from the resource recovery process. The project and cumulative development are not expected to present problems in solid waste disposal upon implementation of the solid waste program./8/

All utilities and public services could serve the project with existing capacities and this topic will therefore not be discussed further in the project EIR.

NOTES - Utilities and Public Services

/1/ Joseph A. Sullivan, Chief, Support Services, San Francisco Fire Department, written communication, December 16, 1981.

/2/ Officer Paul Libert, Planning and Research Division, San Francisco Police Department, telephone communication, December 18, 1981.

/3/ Alfred Williams, Industrial Power Engineer, Pacific Gas and Electric Company, telephone communication, December 23, 1981.

/4/ Les Watson, Building Industry Consultant, Pacific Telephone, telephone communication, December 23, 1981.

/5/ J. E. Kenck, Manager, San Francisco Water Department, written communication, January 7, 1981.

/6/ Nathan Lee, Engineering Associate II, San Francisco Cleanwater Program, telephone communication, December 18, 1981.

/7/ Fiore Garbarino, Office Manager, Golden Gate Disposal Company, telephone communication, December 18, 1981.

/8/ David Gavrich, Assistant Manager for Solid Waste Management, Chief Administrative Office, Special Projects, City of San Francisco, telephone conversation, January 6, 1982.

8. Biology.

	<u>Yes</u>	<u>Maybe</u>	<u>No</u>	<u>N/A</u>	<u>Disc.</u>
a. Would there be a reduction in plant and/or animal habitat or interference with the movement of migratory fish or wildlife species?	___	___	<u>X</u>	___	___
b. Would the project affect the existence or habitat of any rare, endangered or unique species located on or near the site?	___	___	<u>X</u>	___	___
c. Would the project require removal of mature scenic trees?	___	___	<u>X</u>	___	___

The project would not effect plant or animal life or habitat; the site is now totally occupied by structures.

9. Land. (topography, soils, geology) Would the proposed project result in or be subject to:

	<u>Yes</u>	<u>Maybe</u>	<u>No</u>	<u>N/A</u>	<u>Disc.</u>
a. Potentially hazardous geologic or soils conditions on or immediately adjoining the site? (slides, subsidence, erosion, and liquefaction)	___	___	<u>X</u>	___	<u>X</u>
b. Grading? (consider height, steepness and visibility of proposed slopes; consider effect of grading on trees and ridge tops)	___	<u>X</u>	___	___	<u>X</u>
c. Generation of substantial spoils during site preparation, grading, dredging or fill?	___	<u>X</u>	___	___	<u>X</u>

A preliminary geotechnical evaluation indicates that the site contains sandy fill and dense sand with occasional thin layers of sand and silty clay above bedrock. Bedrock depth is anticipated to be 100 to 130 ft. below street grade and the groundwater level is expected to be below the proposed basement level. The deep footing excavation may encounter some groundwater seepage, but this would be controlled by localized pumping. The dune sands and clay materials would provide excellent building support with a spread footing foundation. No pile-driving is anticipated./1/

Existing basement walls may be used as shoring for the project foundation pit; otherwise, standard shoring systems would be used. Depending on the footing depths of the project, it may be necessary to underpin the foundations of the adjacent Hallidie Building to the east. The exterior wall and column foundations of the Hallidie Building would only require underpinning if the new foundations were to extend several feet below the existing foundations.

Liquefaction and site displacement hazards on the site during a seismic event would be expected to be extremely low.

A more detailed geotechnical analysis would develop criteria for the final project design, including measures to maintain the integrity of the exteriors of 200 Kearny St. and 154 Sutter St. during construction./2/ Adoption of measures in that report and other measures, both agreed to by the project sponsor (see p. 24) would mitigate potential geotechnical hazards of the project, and this topic will not be discussed in the project EIR.

Sutter and Kearny Sts. would be mechanically swept by the demolition and excavation contractors, as required by Code, so that silt would not be washed into the storm drains and dust would be reduced. This would be a provision of excavation and demolition contracts.

NOTES - Land

/1/ Preliminary Geotechnical Evaluation, Sutter/Kearny Building, Woodward-Clyde Consultants, January 21, 1982.

/2/ Carol Ries, project engineer, Woodward-Clyde Consultants, telephone conversation, April 26, 1982.

10. Water. Would the proposed project result in:

	<u>Yes</u>	<u>Maybe</u>	<u>No</u>	<u>N/A</u>	<u>Disc.</u>
a. Reduction in the quality of surface water?	<u>---</u>	<u>---</u>	<u>X</u>	<u>---</u>	<u>X</u>
b. Change in runoff or alteration to drainage patterns?	<u>---</u>	<u>---</u>	<u>X</u>	<u>---</u>	<u>X</u>
c. Change in water use?	<u>X</u>	<u>---</u>	<u>---</u>	<u>---</u>	<u>X</u>
d. Change in quality of public water supply or in quality or quantity (dewatering) of groundwater?	<u>---</u>	<u>---</u>	<u>X</u>	<u>---</u>	<u>X</u>

As the site is now completely occupied by existing buildings, no change in runoff water quality or drainage patterns is expected after project completion. Water use would increase by approximately 25,000 gpd (see Utilities and Public Services, above). No dewatering appears necessary (see Land, above).

11. Energy/Natural Resources. Would the proposed project result in:

	<u>Yes</u>	<u>Maybe</u>	<u>No</u>	<u>N/A</u>	<u>Disc.</u>
a. Any change in consumption of energy?	<u>X</u>	<u>---</u>	<u>---</u>	<u>---</u>	<u>X</u>
b. Substantial increase in demand on existing energy sources?	<u>---</u>	<u>X</u>	<u>---</u>	<u>---</u>	<u>X</u>
c. An effect on the potential use, extraction, conservation or depletion of a natural resource?	<u>---</u>	<u>X</u>	<u>---</u>	<u>---</u>	<u>X</u>

The building would be constructed to conform with Title 24 of the California Administrative Code, Energy Conservation Standards, and would be designed to minimize energy use. Energy consumption would increase on the site as a result of the increase in total square footage of structure. Electrical and natural gas demand characteristics cannot be identified until more precise building designs are developed. Energy demands and potential conservation measures will be discussed in the project EIR.

Shadows from the structure may result in a reduction in the feasibility of future active solar energy collection installations in some nearby locations off-site; a shadow study will be prepared and discussed in the project EIR. No existing active solar energy collection installations would be affected as none are located in the immediate area north of the site. None are proposed for the project. No other natural energy resources would be directly affected.

12. Hazards. Would the proposed project result in:

	<u>Yes</u>	<u>Maybe</u>	<u>No</u>	<u>N/A</u>	<u>Disc.</u>
a. Increased risk of explosion or release of hazardous substances (e.g., oil, pesticides, chemicals or radiation), in the event of an accident, or cause other dangers to public health and safety?	---	---	<u>X</u>	---	---
b. Creation of or exposure to a potential health hazard?	---	---	<u>X</u>	---	---
c. Possible interference with an emergency response plan or emergency evacuation plan?	---	<u>X</u>	---	---	<u>X</u>

The project would increase the City's daytime population; occupants of the proposed building would contribute to congestion if an emergency evacuation of Downtown were required. The project sponsor has agreed to the measure on p. 27 to mitigate the impact of the project on the City's emergency response plan. This issue will not be discussed in the EIR.

13. Cultural Resources. Would the proposed project:

	<u>Yes</u>	<u>Maybe</u>	<u>No</u>	<u>N/A</u>	<u>Disc.</u>
a. Include or affect a historic site, structure or building?	<u>X</u>	---	---	---	<u>X</u>
b. Include or affect a known archaeological resource or an area of archaeological resource potential?	---	<u>X</u>	---	---	<u>X</u>
c. Cause a physical change affecting unique ethnic or cultural values?	---	---	<u>X</u>	---	<u>X</u>

The three structures on the site are rated in the survey of architecturally significant buildings which was conducted for the Foundation for San Francisco's Architectural Heritage.^{/1/} The buildings at 200 Kearny St. and 154 Sutter St. are also included in the Department of City Planning (DCP) architectural survey and in the list of architecturally and/or historically significant buildings adopted by the City Planning Commission in Resolution No. 8600.

Effects on architectural resources will be discussed in the project EIR.

Archaeological resources may exist on or near the project site. If any artifacts were to be discovered during site excavation, the project sponsor has agreed to measures on p. 25 to determine significance of the artifacts and their possible recovery. Therefore, this topic will not be discussed further in the EIR.

NOTE - Cultural Resources

/1/ Foundation for San Francisco's Architectural Heritage, Splendid Survivors, California Living Books, 1979.

C. MITIGATION MEASURES	<u>Yes</u>	<u>No</u>	<u>Disc.</u>
Are mitigation measures included in the project?	<u>X</u>	<u> </u>	<u>X</u>
Are other mitigation measures available?	<u>X</u>	<u> </u>	<u> </u>

Mitigation measures proposed as part of the project include the following:

URBAN DESIGN

- The project would be designed to complement the Hallidie Building adjacent to the site on the east. The setback of the tower would be intended to preserve the pedestrian scale of the Sutter St. elevation of the structure.

POPULATION/EMPLOYMENT/HOUSING

- The project sponsor would give current tenants the right-of-first-refusal for leasing space in the project at then-current market rents.

TRANSPORTATION/CIRCULATION

- The project sponsor would encourage transit use through the sale on-site of BART and Muni passes to project occupants, and by encouraging occupant carpool and vanpool systems in cooperation with the non-profit RIDES for Bay Area Commuters organization.
- Secure bicycle parking facilities would be provided, to encourage the use of bicycles by occupants and messengers.
- Two off-street loading docks would be provided, which would reduce on-street commercial deliveries and their associated congestion on Sutter and Kearny Sts., and Hardie Place.
- During the construction period, project truck movement would be limited to the hours between 9 a.m. and 4 p.m., to minimize peak-hour traffic conflicts.
- The project sponsor would contribute to an established Downtown transit assessment district, as appropriate, which would mitigate potential peak-hour transit congestion associated with project development.

AIR QUALITY/CLIMATE

- During excavation, unpaved demolition and construction areas would be wetted to hold down dust. If this were done at least twice a day with complete coverage, particulate emissions (dust) would be reduced by about 50%.
- The general contractor would maintain and operate construction equipment in such a way as to minimize exhaust emissions.

- Should the results of a detailed wind analysis indicate that the project would have substantial wind effects, additional mitigation measures would be considered.

UTILITIES AND PUBLIC SERVICES

- To reduce the demand on police protection services, the project would incorporate internal security measures such as closed circuit television cameras and Life Safety Code measures, including fire alarms, an emergency communication system, an emergency power supply and an on-site emergency water supply. These measures would reduce hazards to building occupants during an earthquake or fire.
- The project would incorporate low-flow faucet and toilet fixtures to reduce water consumption and wastewater.
- The building would be equipped with a trash compactor to reduce the volume of solid waste requiring storage and transport. Separate storage facilities for recyclable waste material would be provided.

LAND (Topography, Soils, Geology)

- A detailed foundation and structural design study would be conducted for the building by a California licensed structural engineer and geotechnical consultant. The project sponsor would follow the recommendations of these studies during the final design and construction of the project.
- The project sponsor would require the project contractor and sub-contractors to obtain a Faithful Performance and Payment Bond, if sufficient financial capability is not evident, and to be responsible for any damage to existing buildings which might result from excavation. This bond would protect the project sponsor and owners of adjacent properties if any damage to these properties were to result from construction activities.
- Excavation pit walls would be shored up and protected from slumping or lateral movement of soils into the pit. Shoring and sheeting with soldier beams could be used for this purpose. The contractor would comply with the Excavation Standards of the California Occupational Safety and Health Agency (Department of Industrial Relations).
- If groundwater seepage from foundation footing excavation requires pumping and disposal, water pumped from the site would be retained in a holding tank to allow suspended particles to settle, if this is found necessary by the Industrial Waste Division of the Department of Public Works, to prevent sediment from entering the storm drain/sewer lines.

ENERGY

- The project would comply with the former Federal Energy Building Temperature Restrictions in the operation of heating, ventilating and air conditioning (HVAC) equipment. The HVAC system would be equipped with an economizer cycle to use outside air for cooling, as feasible.

- Tenant energy consumption would be metered on a floor-by-floor basis.

HAZARDS

- An evacuation and emergency response plan would be developed by project sponsor or building management staff, in consultation with the Mayor's Office of Emergency Services, to insure coordination between the City's emergency planning activities and the project's plan and to provide for building occupants in the event of an emergency. The project's plan would be reviewed by the Office of Emergency Services and implemented by building management before issuance by the Department of Public Works of final building permits.

CULTURAL

- Should evidence of cultural or historic artifacts of significance be found during project excavation, the Environmental Review Officer and the President of the Landmarks Preservation Advisory Board would be notified. The project sponsor would select an archaeologist or other expert to help the Office of Environmental Review determine the significance of the find and whether feasible measures, including appropriate security measures, could be implemented to preserve or recover such artifacts. The Environmental Review Officer would then recommend specific mitigation measures, if necessary, and recommendations would be sent to the State Office of Historic Preservation. Excavation or construction which might damage the discovered cultural resources would be suspended for a maximum of four weeks to permit inspection, recommendation and retrieval, if appropriate.

D. ALTERNATIVES	Yes	No	Disc.
Were other alternatives considered:	<u>X</u>	<u> </u>	<u>X</u>

The following alternatives will be addressed in the project EIR:

1. The "no-project" alternative, including development elsewhere.
2. An alternative that would conform to controls proposed in Guiding Downtown Development (San Francisco Department of City Planning, May 1981).
3. An alternative that would demolish all site buildings and develop an office building at an FAR of 14:1.
4. An alternative that would preserve the A-rated 200 Kearny St. and the B-rated 154 Sutter St. buildings in their entirety.

Other alternatives may be identified and discussed in the project EIR.

E. MANDATORY FINDINGS OF SIGNIFICANCE

	<u>Yes</u>	<u>No</u>	<u>Disc.</u>
1. Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal, or eliminate important examples of the major periods of California history or prehistory?	___	<u>X</u>	___
2. Does the project have the potential to achieve short-term, to the disadvantage of long-term, environmental goals?	___	<u>X</u>	___
3. Does the project have possible environmental effects which are individually limited, but cumulatively considerable?	<u>X</u>	___	<u>X</u>
4. Would the project cause substantial adverse effects on human beings, either directly or indirectly?	___	<u>X</u>	___
5. Is there a serious public controversy concerning the possible environmental effect of the project?	___	<u>X</u>	<u>X</u>

The project may contribute to the cumulative effects of downtown development on transportation systems, air quality, energy demand, and housing demand.

There is some possible controversy about proposed treatment of the buildings at 200 Kearny St. and 154 Sutter St., related to issues of architectural interest and the context of the project block face along Sutter St.

On the basis of this initial evaluation:

- _____ I find the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared by the Department of City Planning.
- _____ I find that although the proposed project could have a significant effect on the environment, there WILL NOT be a significant effect in this case because the mitigation measures, numbers _____, in the discussion have been included as part of the proposed project. A NEGATIVE DECLARATION will be prepared.
- ✓ _____ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.



Robert W. Passmore
Assistant Director-Implementation

for

Dean Macris
Director

Date: 4/27/82

APPENDIX B: ARCHITECTURAL RESOURCES

APPENDIX B-1: ARCHITECTURAL EVALUATION SURVEYS

The architectural ratings discussed in the text of this report (see Section III.B. Environmental Setting, pp. 35-42 and Figure 17, pp. 40-41) represent the results of two separate architectural surveys.

SAN FRANCISCO DEPARTMENT OF CITY PLANNING INVENTORY

Between 1974 and 1976, the San Francisco Department of City Planning conducted a citywide inventory of architecturally significant buildings. An advisory review committee of architects and architectural historians assisted in the final determination of ratings for the 10,000 buildings, the results of which were entered in an unpublished 60-volume record of the inventory. The rated buildings are represented on a set of color-coded maps which identify the location and relative significance of each building surveyed. The inventory and maps are on file at the Department of City Planning.

The inventory assessed the architectural significance of the surveyed structures from the standpoint of overall design and particular design features. Both contemporary and older buildings were included, but historical associations were not considered. Each building was rated numerically according to its overall architectural significance. The ratings ranged from a low of "0" to a high of "5". Factors considered included architectural significance, urban design context, and overall environmental significance. The architectural survey resulted in a listing of the best 10% of San Francisco's buildings. In the estimation of the inventory participants, buildings rated "3" or higher represent approximately the best 2% of the City's architecture. A full description of the survey rating system is available at the Department of City Planning, 450 McAllister St.

HERITAGE SURVEY

The Foundation for San Francisco's Architectural Heritage, through its consultants, Charles Hall Page & Associates, Inc., conducted an architectural and historical survey of all downtown structures. In 1979, the inventory results were published in the book Splendid Survivors (Foundation for San Francisco's Architectural Heritage, Splendid Survivors, California Living Books, San Francisco, 1979). Criteria considered in rating the buildings include Architectural Significance, Historic Context and Negative Alterations. Summary ratings from "A" to "D" were then assigned to each building on the basis of these scores. The summary ratings are described below:

- A. Highest Importance. Individually the most important buildings in downtown San Francisco. All "A" buildings are eligible for the National Register and have highest priority for City landmark status.

- B. Major Importance. Buildings which are of individual importance by virtue of architectural, historical, and environmental criteria. "B" buildings may be eligible for the National Register. The Landmarks Preservation Advisory Board does not distinguish between A- and B-rated buildings for the purpose of preservation.
- C. Contextual Importance. Buildings which are distinguished by their scale, materials, compositional treatment, cornice and other features. Many "C" buildings may be eligible for the National Register as part of historic districts.
- D. Minor or No Importance. Buildings which are insignificant examples of architecture. Most "D" buildings are "sites of opportunity" for new development.

NOT RATED. Buildings which have been built or suffered insensitive exterior remodelings since 1945.

ARCHITECTURALLY AND/OR HISTORICALLY SIGNIFICANT BUILDINGS IN THE DOWNTOWN

The City Planning Commission adopted by Resolution No. 8600 (May 29, 1980), a "List of Architecturally and/or Historically Significant Buildings in The Downtown Area", based on the above described surveys. Generally, buildings rated "3" or higher in the DCP survey or "A" or "B" in the Heritage survey were placed on the list. The purpose of the list is to advise developers and building owners of the importance the City places upon their conservation and to require special review by the Commission of any plans which would affect any building or buildings on the list. As noted in Section III.B., two buildings on the project site are included on this list.

APPENDIX B-2: PROPOSED HISTORIC DISTRICTS/1/

The Heritage Study published in Splendid Survivors identified several areas of Downtown that appear to be eligible for National Register Historic Districts.

A Historic District is a group of contiguous buildings or sites which meet the criteria of the National Register. It is not necessary that each building in a district be individually eligible, or that every building be a positive contributor, but that collectively they represent a unified ensemble which expresses a coherent image of a period in the history of a place or its architecture.

Listing as part of a Historic District entails the same provisions and restrictions as individual listing on the National Register. Thus, similarly, Districts are afforded a degree of protection from federally-licensed or funded projects that would impinge on their integrity. More importantly, in downtown San Francisco, buildings in Districts may be subject to the provisions of the Tax Reform Act of 1976, as amended by the Economic Recovery Act of 1981, and may be eligible for federal grants and loans for rehabilitation. Thus, there are significant economic incentives to preservation of buildings in Districts.

The section of Sutter St. which makes up the potential Retail-Shopping Historic District is a two-block area from Montgomery St. west to Grant Ave. (see Figure 17, p. 40-41). The north side of Sutter St. from Montgomery St. west to Kearny St., which includes two buildings on the project site (154 Sutter St. and 200 Kearny St.), is considered by Heritage to be "...one of the finest and most important short stretches of architecture in downtown San Francisco..." This grouping of buildings provides an example of post-earthquake commercial architecture. A harmonious streetscape is established by use of buildings of similar scale and massing with detailed and balanced facades./1/

The potential Kearny St. Historic District includes two blocks of Kearny from just north of Sutter St. to Pine St (see Figure 20, p. 47). The buildings were built before the earthquake, and are "unified in height, scale, materials and style."/1/ The 220 Kearny St. building on the project site is in this proposed district.

NOTE - Architectural Resources

/1/ Foundation for San Francisco's Architectural Heritage, Splendid Survivors, California Living Book, San Francisco, 1979, p. 249.

APPENDIX C: EMPLOYMENT AND HOUSING FACTORS

TABLE C-1: MAJOR OFFICE BUILDING CONSTRUCTION IN SAN FRANCISCO THROUGH 1981
IN GROSS SQUARE FEET

Year	Total Gross Sq. Ft. Completed	5-Year Total	5-Year Annual Average	Cumulative Total of All Office Buildings	Cumulative Total of All Downtown Office Buildings
Pre-1960		(Net)(a)	(Net)(a)	28,145,000(b)	24,175,000(c)
1960	1,183,000				
1961	270,000				
1962	--				
1963	--				
1964	1,413,000				
		2,866,000	573,200		
1960-1964		(2,580,000)	(516,000)	30,725,000	26,754,000
1965	1,463,000				
1966	973,000				
1967	1,453,000				
1968	1,234,000				
1969	3,256,000				
		8,379,000	1,675,800		
1965-1969		(7,541,000)	(1,508,000)	38,266,000	34,295,000
1970	1,853,000				
1971	--				
1972	1,961,000				
1973	2,736,000				
1974	2,065,000				
		8,615,000	1,723,000		
1970-1974		(7,753,000)	(1,550,000)	46,019,000	42,048,000
1975	536,000				
1976	2,429,000				
1977	2,660,000				
1978	--				
1979	2,532,000				
		8,157,000	1,631,400		
1975-1979		(7,341,000)	(1,468,000)	53,360,000	49,389,000
1980	1,284,000				
1981	3,029,000				
		4,313,000(d)	2,156,500(d)		
1980-1981		(3,881,700)(d)	(1,940,850)(d)	57,241,700	53,270,700

TABLE C-1: MAJOR OFFICE BUILDING CONSTRUCTION IN SAN FRANCISCO THROUGH 1981
IN GROSS SQUARE FEET (Continued)

- (a) Net equals 90% of gross. Net new space is added at an increase factor of 90%, since it is assumed that space equal to 10% of a new building is demolished to make land available for the new replacement building.
- (b) Source: San Francisco Downtown Zoning Study, Working Paper No. 1, January 1966, Appendix Table 1, Part 1. For pre-1965, data include the area bounded by Vallejo, Franklin, Central Skyway, Bryant and Embarcadero. Also includes one-third of retail-office mixed use. For post-1964, data include the entire city.
- (c) Gross Floor Space for downtown offices are included for the following functional areas: Financial, Retail, Hotel, Jackson Square, Golden Gateway, Civic Center, South of Market, and Outer Market Street as defined in the cited January 1966 report. For post-1964, the entire area east of Franklin Street is included.
- (d) Two-year total and average.
-

SOURCE: Department of City Planning, August 1, 1982

TABLE C-2: CUMULATIVE OFFICE DEVELOPMENT IN DOWNTOWN SAN FRANCISCO AS OF JANUARY 27, 1983

Assessor's Block		Case No.	Project Name	Office		Retail	
				(Gross Sq. Ft.)		(Gross Sq. Ft.)	
				Total	Net	Total	Net
				New	New	New	New
				Constr.	Constr.	Constr.	Constr.
Downtown Office Projects Under Formal Review							
110	82.129E	Embarcadero Terraces	142,000	142,000		3,000	3,000
112	81.258	Ice House Conversion(C)*	209,000	209,000			
113	82.418E	1171 Sansome	30,000	30,000			
136	81.245	955 Front at Green	50,000	50,000			
176	81.673EACV	Columbus/Pacific Savoy	49,000	49,000		22,000	22,000
176	82.368ED	900 Kearny	25,000	25,000		5,000	5,000
228	81.610ED	569 Sacramento (C)	19,000	19,000			
269	81.132ED	Russ Tower Addition	392,900	392,900		13,000	13,000
288	81.687ED	222 Kearny/Sutter	269,400	202,400		10,000	-8,400
331	81.448E	Mixed Use Development	218,600	207,600		44,700	19,700
669	81.667ED	1361 Bush (C)	45,720	45,720			
716	81.581ED	Polk/O'Farrell	61,600	61,600		22,400	22,400
814	81.540E	101 Hayes	126,000	126,000		6,000	6,000
816	82.212E	300-350 Gough	16,000	16,000			
834	82.603E	25 Van Ness (addition)	42,000	42,000			
3702	81.549ED	1145 Market	137,500	108,500		8,000	8,000
9907	81.245C	New Montgomery Pl.	231,500	217,400		2,200	-3,900
3708	81.493ED	71 Stevenson	324,600	324,600		6,200	6,200
3717	81.183E	123 Mission	342,800	342,800			
3733	82.29E	832 Folsom	50,000	50,000			
3750	82.241E	600 Harrison at Second	228,000	228,000		10,000	10,000
3750	82.77E	642 Harrison (C)	54,400	45,900			
3760	81.386	401 6th	7,000	7,000			
3763	82.384EV	400 2nd at Harrison	71,500	49,500			
3778	81.630ED	548 5th/Brannan	250,000	250,000			
3786	82.33E	655 5th/Townsend	126,250	126,250			
3788	82.352EV	640 2nd	39,100	37,400			
3789	82.31EV	615 2nd/Brannan (C)	106,000	106,000			
9900	81.63	Ferry Building Rehab	308,000	96,000		150,000	124,000
TOTAL UNDER FORMAL REVIEW			3,972,870	3,607,570		302,500	227,000

(continued)

TABLE C-2: CUMULATIVE OFFICE DEVELOPMENT IN DOWNTOWN SAN FRANCISCO AS OF
JANUARY 27, 1983 (Continued)

Assessor's Block		Case No.	Project Name	Office		Retail	
				(Gross Sq. Ft.)		(Gross Sq. Ft.)	
				Total New Constr.	Net New Constr.	Total New Constr.	Net New Constr.
Approved Downtown Office Projects							
58	82.234E	Roundhouse	45,000	45,000	3,000	3,000	
141		100 Broadway	13,000	13,000			
143		1000 Montgomery (C)	39,000	39,000			
161	80.191	Mirawa Center	36,000	36,000	30,650	30,650	
164	81.631D	847 Sansome	23,750	23,750			
164	81.573D	50 Osgood Place	22,500	22,500	9,100	9,100	
166	80.15	750 Battery	105,400	105,400	12,800	12,800	
240	81.705ED	580 California/Kearny	329,500	260,000	6,500	6,500	
261	81.249ECQ	333 California	640,000	466,500	15,500	15,500	
262	81.206D	130 Battery	41,000	41,000			
265	81.195ED	388 Market at Pine	234,500	85,500	10,000	-8,500	
267	81.241D	160 Sansome	2,200	2,200			
268	81.422D	250 Montgomery at Pine	105,700	65,700	8,000	8,000	
270	81.175ED	466 Bush	86,700	86,700	7,800	2,200	
271		582 Bush	18,900	18,900			
288	81.461EC	333 Bush (Campeau)	498,400	458,100	20,900	20,900	
294	82.870	44 Campton Place	7,600	7,600			
311	82.120D	S.F. Federal	246,800	218,850	1,600	-9,440	
834	82.603E	25 Van Ness (C)	101,600	101,600	36,400	36,400	
3512	82.14	Van Ness Plaza	170,000	170,000	6,000	6,000	
3518	81.483V	291 10th St.	25,700	25,700		-25,700	
3705	80.315	Pacific III Apparel Mart	332,400	332,400			
3707	81.492ED	90 New Montgomery	124,300	124,300	3,350	3,350	
3709	81.113ED	Central Plaza	353,100	136,300	17,400	17,400	
3715	82.16EC	121 Steuart	33,200	33,200			
3722	81.417ED	144 Second at Minna	30,000	30,000			
3724	81.102E	Holland Ct. (C)	27,850	27,850			
3729	82.860	774 Tehama	5,800	5,800			
3732	81.548DE	466 Clementina (C)	15,150	15,150			
3733	81.2	868 Folsom	65,000	65,000			
3735	80.106	95 Hawthorne (C)	61,900	61,900			
3738	DR85	315 Howard	294,000	294,000	3,200	3,200	
3741	82.203C	201 Spear	229,000	229,000	5,200	5,200	
3749	81.18	Marathon - 2nd & Folsom	681,700	681,700	39,300	39,300	
3752	77-220	Office Bldg. (YBC SB-1)	11,000	11,000			
3763	81.287V	490 2nd at Bryant (C)	40,000	40,000			
3763	81.381	480 2nd at Stillman (C)	35,000	35,000			
3775	81.147V	338-340 Brannan (C)	36,000	36,000			
3776	81.59	Welsh Commons	55,600	55,600	12,000	12,000	
3776	81.693EV	539 Bryant/Zoe	63,000	63,000			
3787	81.306	252 Townsend at Lusk	81,900	81,900			
3788	81.296Z	690 2nd/Townsend (C)	16,600	16,600	16,000	16,000	
3789	81.552EV	625 2nd/Townsend (C)	157,000	157,000			
3794	81.569EV	123 Townsend	104,000	49,500			
3794		155 Townsend	19,000	19,000			
3803	81.244D	China Basin Expansion	196,000	196,000			
TOTAL APPROVED			5,861,750	5,090,200	264,700	203,860	

TABLE C-2: CUMULATIVE OFFICE DEVELOPMENT IN DOWNTOWN SAN FRANCISCO AS OF
JANUARY 27, 1983 (Continued)

Assessor's Block Case No.		Project Name	Office		Retail	
			(Gross Sq. Ft.)		(Gross Sq. Ft.)	
			Total New Constr.	Net New Constr.	Total New Constr.	Net New Constr.
Downtown Office Projects Under Construction						
106	81.415ED	1299 Sansome	41,000	41,000	3,500	3,500
227	80.296	Bank of Canton	230,500	177,500		-800
163	81.1	901 Montgomery	63,000	63,000	18,800	18,800
164	81.251D	936 Montgomery	21,500	11,500		
166	CU81.7	222 Pacific at Front(C)	142,000	142,000		
167		Golden Gateway III	103,000	103,000		
196		736 Montgomery	40,000	40,000		
196	CU79.49	Pacific Lumber Co.	92,000	92,000		
206	81.165D	401 Washington/Battery	13,200	13,200	1,800	1,800
208	81.104EDC	Washington/Montgomery	235,000	233,300	4,000	-1,200
237	DR80.6	353 Sacramento (Daon)	277,000	251,000	8,300	-2,000
239	DR80.1	456 Montgomery	160,550	160,550	24,250	24,250
240	DR80.16	550 Kearny	71,400	71,400		
263	CU79.12	101 California	1,265,000	1,257,000	24,700	-14,300
271	81.517	453 Grant	27,500	27,500	6,200	6,200
287	81.550D	Sloane Building (C)	125,300	125,300	30,000	30,000
288	DR80.24	101 Montgomery	264,000	234,000	5,900	-14,100
289	81.308D	One Sansome	603,000	603,000	7,000	7,000
292	DR79.13	Crocker National Bank	676,000	495,000	86,000	54,000
312	79.370	50 Grant	90,000	90,000		
351	79.133	U.N. Plaza	92,050	92,050		
351	DR79.24	Mardikian/1170 Market	40,000	40,000		
672		Wealth Investments	104,500	104,500		
738		One Flynn Center	25,000	25,000		
762		Opera Plaza	50,000	50,000		
3702	81.25	1155 Market/8th	138,700	138,700	8,800	8,800
3708	80.34	25 Jessie/Ecker Square	111,000	111,000		
3709	80.36	Five Fremont Center	791,200	722,200	35,000	17,300
3712	79.11	Federal Reserve Bank	640,000	640,000		
3715		141 Steuart	80,000	80,000		
3717	79.236	101 Mission at Spear	219,350	219,350		
3717		150 Spear	330,000	330,000		
3717	82.82D	135 Main	260,000	260,000	4,000	4,000
3717	80.349	Spear/Main (160 Spear)	279,000	279,000	7,600	7,600
3718	79.12	Pacific Gateway	540,000	540,000	7,500	7,500
3724		Yerba Buena West	335,000	335,000		
3735		Convention Plaza	339,000	339,000		
3735		Planter's Hotel (C)	20,000	20,000		
TOTAL UNDER CONSTRUCTION			8,935,750	8,557,050	283,350	158,350
GRAND TOTAL (ALL PROJECTS)			18,770,370	17,254,820	850,550	589,210

* (C) - Conversion (generally industrial and/or warehouse to office)

SOURCE: Department of City Planning.

TABLE C-3: PROJECTED EFFECTS OF DOWNTOWN OFFICE DEVELOPMENT ON REGIONAL HOUSING MARKETS, 1982-90

	Net Project Demand in 1985		Gross Cumulative Demand 1982 to 1990(c)		Net Housing Stock Growth 1982-1990(d)		Demand as a Percent of Growth, 1982 to 1990	
	No. Households		No. Emp.	No. Households	No. Units		Project	Cumulative
San Francisco (a)	45 to 120	10,400 to 27,700	7,400 to 15,400	12,000	0.3 to 1.0	61.7 to 128.3		
Peninsula (b) (San Mateo and Santa Clara Counties)	75	12,500	9,600	87,600	0.1	11.0		
East Bay (b) (Alameda and Contra Costa Counties)	125	20,800	16,000	111,800	0.1	14.3		
North Bay (b) (Marin and Sonoma Counties)	50	8,300	6,400	36,800	0.1	17.4		
TOTAL	295 to 370	52,000 to 69,300	39,400 to 47,400	248,200	0.1	15.9 to 19.1		

(a) The range of San Francisco employees and households based on a report prepared by Recht Hausrath & Associates, referenced as Appendix C in the 101 Montgomery Street Final EIR, EE 80.26, Certified May 7, 1981 (15-30% of all employees would reside in San Francisco and 1.4 workers would occupy each household) and "Office Housing Production Program (OHPP) Interim Guidelines," Department of City Planning, January 22, 1982 (40% of all employees would reside in San Francisco and 1.8 workers would occupy each household).

(b) Distribution of employees based on weighted average of expected employees in Federal Reserve Bank (EE 78.207), 101 California Street (EE 78.27), Pacific Gateway, (EE 78.61), and Crocker National Bank (EE 78.298), from 456 Montgomery Street Final EIR (EE 78.178) p. 167 (18% in the Peninsula, 30% in the East Bay, and 12% in the North Bay). Number of workers per household in these counties is assumed to be 1.3 based on 1980 Census data.

(c) Total office space considered in this analysis is about 17.3 million sq. ft. of net new office space (see Tables C-1 and C-2). The proposed Housing Element (May 1982) estimates San Francisco housing needs from 1980-85 in Table 21A. This estimate, based on the Citizen's Housing Task Force Report, July 21, 1981, shows a need for about 16,000 to 19,000 units. The "needs" estimate uses a similar office development basis, but also includes housing demand generated by other sources in addition to office development and covers the years 1980-85.

(d) Net housing stock growth is based on "Projections 79," Association of Bay Area Governments, January 1980. Projections contained in that document for 1980-1990 were prorated to reflect 1982-1990 net housing stock growth.

SOURCE: Environmental Science Associates, Inc.

TABLE C-4: HOUSING AFFORDABILITY BY HOUSEHOLD INCOME

Gross Annual Income Per Household or Per Individual	Maximum Affordable Monthly Housing Expenditure*	Housing Cost and Type of Unit		Source
		Monthly Cost**	Type of Unit (Price)	
\$5,000	\$125			
8,300 (a)	208			
10,000	250			
10,680	267	\$267 -	Census Median Rent	(e1)
11,560	289	289 -	Studio Apartments	(f1)
15,000	375			
18,200	455	455 -	Median Rent, All Units	(f2)
20,000	500			
23,520	588	588 -	Rent, 3+ Bedroom Units	(f3)
25,000 (b)	625			
27,300 (c)	683			
30,000 (b)	750			
35,000	875			
40,000	1,000			
40,880	1,022	1,022 -	Lowest House Price (\$95,000)	(g1)
45,000	1,125	1,125 -	Census Median Value (104,600)	(e2)
50,000	1,250			
52,560 (d)	1,314			
55,000	1,375			
65,080	1,627	1,627 -	Median House Price (151,203)	(g2)
↙				
101,880	2,547	2,547 -	Highest House Price (236,750)	(g3)
↙				
300,000 (d)	7,500			

See following page for references.

TABLE C-4: HOUSING AFFORDABILITY BY HOUSEHOLD INCOME (continued)

- * The Office/Housing Production Program (OHPP) Interim Guidelines (January, 1982) define affordable housing as follows:
rental expenses not exceeding 30% of gross monthly income, adjusted for family size; and home ownership expenses not exceeding 38% of gross monthly income, adjusted for family size, including mortgage payments, property taxes, insurance, and/or homeownership association dues.
 For the purpose of this table, 30% of gross monthly income is used to calculate housing affordability for both renters and owners. For owners it is assumed that 8% of gross monthly income would cover property taxes, insurance, and/or homeownership association dues and other related expenses. No adjustment has been made for family size because family circumstances vary widely.
- ** Monthly housing costs refer to rents and mortgage payments for the housing prices shown in parentheses; sources of rents and house prices are as footnoted. Monthly costs of ownership housing were calculated as monthly mortgage expenses assuming 20% down payment, 30-year mortgage, and 16% interest rate, not including insurance, property taxes, and other related housing costs.
- a. U.S. Bureau of Labor Statistics, March, 1981, "Area wage survey for the San Francisco-Oakland, California Metropolitan Area." \$8,300 was the mean 1980 income of inexperienced file clerks, one of the lowest-paid office occupations listed.
- b. The range of \$25,000 to \$30,000 is assumed to approximate the median annual income of project employees (see discussion of Income, Section IV. D.).
- c. The \$27,300 income figure was derived by inflating the \$16,300 median income of downtown office workers from the 1974 SPUR survey through December, 1981 by 67% using U.S. Bureau of Labor Statistics national wage information for nonsupervisory finance, insurance, and real estate sector employees since 1974.
- d. Montgomery-Washington Building FEIR, 81.104E, certified January 28, 1982. The median salary of wage earners at 601 Montgomery St. was estimated to be \$52,560 and the highest salary for corporate officers \$300,000, according to a 1981 survey.
- e. Department of City Planning, "1980 Census Information," March 1982:
 1. median rent 2. median noncondominium housing value
 Rental data include residential hotels whose rent levels may be substantially lower than other types of rental dwellings and may therefore have an effect on the median rent.
- f. Department of City Planning, "Rent Survey," 1980. Median rents are for:
 1. studio apartments 2. all units 3. 3+ bedrooms
 These data are based on a small nonrandom sample of newspaper ads and may not reflect true rental costs.
- g. San Francisco Board of Realtors, "Multiple Sales Service," October 5, 1981.
 (Annual data on housing sales prices including all homes sold from February 11, 1981 to October 1, 1981):
 1. lowest price 2. median price 3. highest price

SOURCE: Environmental Science Associates, Inc.

APPENDIX D: TRANSPORTATION, CIRCULATION AND PARKING

CUMULATIVE DEVELOPMENT TRAVEL DEMAND

Travel demand from the 17.3 million gross sq. ft. of net new cumulative office development and 0.6 million gross sq. ft. of net new cumulative retail development in downtown San Francisco has been estimated using a land-use approach for trip generation. Future travel into the downtown is assumed to be a result of construction and occupancy of downtown office and retail space. The Office of Environmental Review of the Department of City Planning has identified office projects in the greater downtown area as being under formal review, approved, or under construction. Table C-2 shows the list of projects, distributed by review status, and including Assessor's Block number, City case number, and size of development for each project. The information in this table was the best data available from the Department of City Planning at the time of preparation of this document.

Listed in Table C-2 are all office projects in the greater downtown area and the south of Market area that are under construction, have been approved, or for which a Preliminary Draft EIR (PDEIR) has been submitted to the City for review, and all office projects in redevelopment areas that are under construction or for which Land Disposition Agreements have been approved by the San Francisco Redevelopment Agency Commission. Projects that were not definitive or appeared to be inactive or withdrawn by the project sponsor were not included in the cumulative analyses.

Hotel projects have not been included in the cumulative analyses because hotel uses have different peaking characteristics from office buildings and generally do not significantly affect peak-hour traffic or transit. Residential projects have not been included because residential travel in the downtown is generally in the contra-commute direction during peak-hours and because the office trip generation rate and modal split distribution assume that housing would be available in the City. Inclusion of residential projects would thus be double counting of project generated travel.

Two redevelopment areas (Yerba Buena Center and Rincon Point - South Beach) and one private development (Mission Bay) are in or near the Downtown. In the redevelopment areas, most building sites do not yet have approved Land Disposition Agreements (LDA). Until specific LDA's are approved, no estimate of travel demand can be made (thus, parcels for which no LDA exists have not been included in the cumulative analyses). Development in the Yerba Buena Center (YBC) Redevelopment Area will be in accordance with the YBC Redevelopment Plan, as amended. Possible land uses that would be in accordance with the Yerba Buena Center Redevelopment Area Plan include commercial entertainment, convention facility (in place), cultural, downtown support service, exhibit/ballroom space, hotel rooms, institutional, light industry, market-rate dwelling units, subsidized dwelling units, office, park or plaza, pedestrian concourse, parking and, retail./1/ Possible land uses in the Rincon Point - South Beach Redevelopment Area include hotel, housing, office, open space, public parking, retail and, warehouse uses./2/ Mission Bay has not been included in the cumulative analyses because no PDEIR has been submitted to the City and it is uncertain what formal proposal may be made. There are currently 11 alternative development scenarios under consideration for Mission Bay.

Existing office and retail space that would be replaced by new buildings was subtracted from the proposed new construction to better approximate the impacts the new buildings would have on transportation facilities. As shown in Table C-2, net new office and retail space is less than total new construction as a result of subtracting out existing office and retail space on sites proposed for new buildings. ("Net new" space refers to the amount of new construction in excess of existing space on each site, in gross sq. ft. of floor space. It does not refer to net leasable nor net rentable floor space).

Estimates of future travel are based on trip generation rates of 17.5 person trip ends (one way trips) per 1,000 net leasable sq. ft. of net new office space and 100 person trip ends (pte) per 1,000 gross sq. ft. of net new retail space.^{/3/} Gross sq. ft. of office space was converted to net leasable sq. ft. by assuming an efficiency factor of 80%. The retail space has been assumed to be primarily "ground-floor retail" that would serve the office building users. Based upon survey data collected at Embarcadero Center, about 45% of the travel generated by "ground-floor retail" uses would be oriented to the office uses on-site and is already included in the office trip generation rate. Thus, 55% of the retail trip generation has been assumed to be "new" to each site.^{/4/}

P.M. peak-hour travel from cumulative development was assigned to modes of travel based upon the regional distribution and modal split shown in Table D-3. About 20% of the office travel and 10% of the retail travel was assumed to occur during the p.m. peak hour. Of the office travel, about 90% [during peak-hours] was assumed to be work-related and 10% was assumed to be other travel. On a daily basis, office travel was assumed to be 57% work-related and 43% other travel.^{/5/}

A basic assumption in all of the transportation analyses is that existing regional distributions and modal splits would continue into the future unchanged. The implicit assumption has been made that about 40% of the future employees would live in San Francisco. If housing is not available in the City, then a greater impact than noted would result on the commute corridors into the City from the North Bay, East Bay, and Southern Peninsula. If housing is not available in the City, however, the impact on Muni would be less than noted because City residents are the majority of Muni users.

Table D-1 shows the existing transit conditions and Table D-2 shows the Muni line-by-line analysis. Transit demand has been projected based upon existing travel patterns and is assumed not to depend upon the availability of transit capacity. Calculations have been made for two levels of operations (load factor). One load factor has been based upon existing capacity and represents conditions that would result if no improvements are made to the transit system. The second load factor is based upon forecast capacity (as defined in each agency's five-year plan) and portrays conditions that would result if planned, scheduled improvements are made.

Muni is proposing to increase systemwide capacity by 19%. BART is projecting a peak hour capacity of 16,500 seats transbay (eastbound) and 11,000 seats westbay (westbound). Recommended maximum capacity, as described by BART, would be 24,750 and 16,500 persons, respectively. AC Transit does not propose any increases for its transbay service. AC Transit is restrained from implementing capacity increases on its transbay routes by the Metropolitan Transportation Commission (MTC) because those routes are in direct competition with BART.

TABLE D-1: EXISTING PEAK HOUR TRANSIT RIDERSHIPS AND CAPACITIES (Selected Routes;/a/ Peak Direction Only)

	Riders	Vehicles	Capacity+		Load Factor		Peak
			Seated	Total	Seated	Total	
Muni/b/ BART/c/:	25,330	N/A	17,360	27,940	1.46	0.91	p.m.
TransBay	13,600	140	10,085	15,130	1.35	0.90	p.m.
Westbay	6,445	97	6,985	10,480	0.92	0.61	p.m.
A-C Transit	9,850	214	10,695	13,360	0.89	0.72	p.m.
SamTrans	1700	37	1740	2,180	0.98	0.78	a.m.
So. Pacific RR	5,180	9	6,590	6,590	0.78	0.78	a.m.
Golden Gate Transit:							
Motor Coach	4,510	117	5,700	6,870	0.79	0.66	a.m.
Ferry	800	3	1,410	2,075	0.57	0.39	a.m.

/a/ Muni: See Table D-2

SamTrans: Lines 7F, 7B, 5M, 7R, 1C, 25, 10T, 10L, 7A, 7Z, 22D.

A-C Transit: Lines A,B,BX,C,CH/CB,E,EX,F,FSG/FX,G,H,K,KH,L,LX,N,NX,O,OX,R/RH,RD/RF/RCV,S,SW,V,W,Y.

/b/ BART data are on a per car basis. Sixteen trains operate in the peak hour. Eastbound: 7 Concord trains (average 10 cars per train); 5 Fremont trains (average 10 cars per train); and 4 Richmond trains (average 5 cars per train), Westbound: 12 trains.

/c/ Capacity has been based on the per-vehicle capacities shown in Table D-1A:

SOURCE: Publicly available data was supplied by the agencies and personnel indicated below.

AGENCY	DATA	PERSONNEL	DATE
BART	Data Acquisition System Representative P.M. Peak Load Factors for March 1982	W. Belding Sr. Economic Analyst	June 9, 1981
A-C Transit	Schedule Checks on Various Weekdays in 1982	Kay More, A-C Transit	June 15, 1982
SamTrans	Ridership Analysis San Francisco Service February 1982	G. Kipp SamTrans	June 14, 1982
CalTrans	CalTrans Ridership Report March 23, 1982	Elmer Hall	June 14, 1982
Golden Gate Transit	Monthly Reports June 1982	A. Zahradnik GGBH&TD	July 1, 1982

TABLE D-1A: VEHICLE CAPACITIES AND STANDEES INCLUDED IN LOAD FACTORS OF TRANSIT SYSTEMS

Agency	Vehicle	Maximum Seats	Recommended Standeers	Recommended Total
Muni	Motor Coach (Average)	45	23	68
	Trolley Coach	50	25	75
	LRV	68	82	150
BART	All	72	36	108
A-C Transit	Motor coach (average)	48	12	60
SamTrans	Motor coach (average)	47	12	59
Southern Pacific	Suburban Car	100	0	100
	Gallery Car	150	0	150
Golden Gate Transit	Motor Coach	45	10	55
	Sausalito Ferry	400	175	575
	Larkspur Ferry	510	240	750

SOURCE: Five-Year Plans for each agency listed.

SamTrans is proposing a capacity of between 4,800 and 5,000 seats per hour on its San Francisco routes. Recommended maximum capacity, as described by SamTrans, would be 6,250 riders. Southern Pacific/CalTrans proposes to increase in seated capacity about 22%; station improvements, including additional parking, are also proposed. Southern Pacific ridership has been steadily declining for several years. Demand projections in this EIR are based upon an existing modal split rather than a trend and consequently show an increase in ridership on Southern Pacific. Operating costs for Southern Pacific commute service have been assumed by a joint-powers committee comprised of CalTrans, Muni, SamTrans, and Santa Clara County Transit. The committee is evaluating the need for service improvements. Golden Gate Transit is proposing to increase peak period (6-10 a.m.) motor coach capacity by 25%. Golden Gate Transit is currently operating only two of the three Larkspur ferries. The proposal for future ferry service improvements involves converting all three Larkspur ferry boats from gas turbine to diesel engines and using all three ferries on the Larkspur/San Francisco route. The district proposes to increase peak hour ferry service by 70% by using all three ferries and operating additional runs during the peak hour./6/

To calculate vehicle trip ends, average automobile occupancies were assumed for each regional area based upon available data. Commute travel to the East Bay is now about 1.8 persons per vehicle; that to the north Bay is about 1.5 persons per vehicle; and that to the southern Peninsula is about 1.2 persons per vehicle./7/ San Francisco auto occupancy was assumed to be 1.4 persons per vehicle./8/

TABLE D-2: EXISTING AND PROJECTED MUNI LOAD FACTORS* (PM PEAK HOUR -- PEAK DIRECTION)

Line	RIDERSHIP				LOAD FACTORS			
	Existing	Future w/o project	Future project	Future w/project	Existing	Future w/o project	Future w/project	Future project
1	1450	1990	6	1990	0.93	1.27	1.28	0.00
1X	640	890	3	890	1.11	1.55	1.55	0.00
2	470	680	2	680	1.10	1.57	1.57	0.00
3	520	720	2	720	1.08	1.50	1.51	0.00
4	470	650	2	650	1.08	1.50	1.50	0.00
5	980	1550	4	1550	0.94	1.48	1.48	0.00
6	540	860	2	860	0.84	1.32	1.33	0.00
7	410	640	2	640	0.77	1.21	1.22	0.00
8	660	1040	3	1040	0.74	1.17	1.17	0.00
9	470	740	2	740	0.89	1.40	1.40	0.00
11	180	290	1	290	0.64	1.01	1.01	0.00
12	450	710	2	710	0.85	1.34	1.35	0.00
14	1040	1640	5	1640	0.92	1.45	1.45	0.00
14GL	210	320	1	320	0.71	1.12	1.12	0.00
14X	340	490	1	490	0.68	0.97	0.97	0.00
15	630	950	3	950	0.88	1.32	1.32	0.00
17X	160	220	1	220	0.64	0.87	0.88	0.00
21	640	1000	3	1000	0.85	1.33	1.33	0.00
27	150	210	1	210	0.58	0.82	0.83	0.00
30	1420	1970	6	1970	0.92	1.28	1.28	0.00
30X	440	600	2	600	0.86	1.18	1.18	0.00
31	660	960	3	960	1.07	1.57	1.57	0.00
31X	410	580	2	580	0.96	1.33	1.34	0.00
38/38L	1960	2790	9	2800	1.01	1.44	1.44	0.00
38AX	450	630	2	630	1.26	1.76	1.76	0.01
38BX	270	380	1	380	0.96	1.35	1.35	0.00
41TC	120	170	1	170	0.41	0.59	0.59	0.00
41MC	180	260	1	260	0.43	0.61	0.61	0.00
42	390	610	2	610	0.99	1.55	1.55	0.00
45	560	780	2	780	0.90	1.25	1.25	0.00
66L	560	760	2	760	0.77	1.05	1.05	0.00
71	450	700	2	700	1.10	1.71	1.71	0.00
80X	420	600	2	600	0.83	1.19	1.19	0.00
J	910	1430	4	1440	0.84	1.32	1.32	0.00
KLMN	5730	9020	25	9040	0.96	1.51	1.51	0.00

*The load factor is the ratio of ridership to existing capacity, where capacity is calculated from the recommended maximum loading of the transit vehicles which is 150% of seated capacity for motor coaches and trolley coaches and 220% of seated capacity for LRVs. As estimates of load factors, these should be regarded as approximate. Muni cordon points, where the ridership and capacity counts were made, do not necessarily correspond precisely to the point of maximum loading on each line. The future load factors have been calculated using existing capacity and do not include any proposed capacity changes. Ridership is the average of the three most recent shedule checks for each route for the months of August 1981 to August 1982, as compiled by the Department of City Planning.

SOURCE: Department of City Planning; Environmental Science Associates, Inc.

Vehicle travel and parking demand have been based upon demand projections and are unconstrained by the ability of the freeway and bridge system to carry the additional demand. Freeway and bridge capacity into the Downtown is essentially fixed at existing levels because major construction would be required to add new capacity. Current levels of vehicle traffic on the freeway and bridge system are at or near capacity. If the projection of person trip ends in autos is correct, the levels of vehicle occupancy would have to increase in the future as the freeway and bridge system could not handle an appreciable increase in autos during the peak hour. If vehicle occupancy were to increase, vehicle trip ends and parking demand would be less than projected. Alternately, the peak hour level of demand could spread into hours adjacent to the peak hour (as is happening). However, there is a limit as to how far the peak can spread over time and still allow business to function. Prediction of a parking deficit is hindered by the inability to accurately predict modal shifts (i.e., shifts from single occupant autos to ridesharing or transit) and by the uncertainties of the City parking policy and implementation (i.e., how many spaces will the City approve in the future, where will they be located and how many existing spaces will the City allow or require to be removed or converted from long-term to short-term.)

Consequently, parking predictions show a deficit based upon existing modal splits. As the factors influencing modal choice -- such as availability of transit and carpools, desirable transit and carpool schedules, walking distance, parking location and availability, parking cost, employee subsidies of parking cost, etc. -- differ between individuals, it is not possible to predict how future travel patterns may differ.

The daily parking demand was based on the projected number of auto driver work and non-work trips. The average percentage of non-work trips for multi-tenanted buildings is estimated to be 43% as assumed in the travel demand analysis. The average length of stay for non-work trips is estimated to be two hours./9/

To estimate the work or long-term parking demand, all of the auto driver work trips were assumed to generate demand for one parking space per trip per day. The non-work or short-term parking demand was calculated by dividing the non-work auto driver trips by a turnover factor based upon average length of stay. (Turnover was calculated by dividing a 9-hour working day, 8:00 a.m. - 5:00 p.m. by the average length of stay of two hours to give a turnover factor of 4.5.) Thus the average short-term (non-work) parking demand was calculated as spaces per hour.

The availability of short-term parking was estimated in an area within 1,000 ft. of the project (which was assumed to represent a 5 minute walking time). Projects proposed and under construction that would generate short-term parking demand within the 1,000 ft. radius area were identified and the short-term parking demand was summed to give a projection of short-term demand. Long-term parking demand was based upon the number of expected work-related auto trips into the downtown. Parking supply was estimated over the greater downtown and South of Market area as travel time from parking space to final destination was no longer assumed to be the primary determinant for parking selection.

INTERSECTION ANALYSIS

The capacity analysis of each intersection at which a turning movement count was made utilized the "critical lane" method. This method of capacity calculation is a summation of maximum conflicting approach lane volumes that

TABLE D-3: TRAVEL DISTRIBUTION AND MODAL SPLIT

Geographic Area	OFFICE								
	Work Travel			Other Travel			RETAIL Travel		
	Geog. %*	Mode	%**	Geog. %*	Mode	%**	Geog. %*	Mode	%**
San Francisco									
Downtown/Northeast	7.0	Auto	9.0	33.0	Auto	2.0	84.0	Auto	3.0
(East of Van Ness,		Muni	61.0		Muni	20.0		Muni	7.0
North of Market		BART	1.0		BART	0.0		BART	1.0
to the Embarcadero,		Walk	29.0		Walk	78.0		Walk	89.0
South of Market to 101)									
Northwest	15.0	Auto	31.0	11.0	Auto	15.0	1.0	Auto	10.0
(Richmond, Marina		Muni	69.0		Muni	85.0		Muni	90.0
Western Addition)									
Southwest	13.0	Auto	29.0	13.0	Auto	12.0	2.0	Auto	10.0
(Sunset, Parkside,		Muni	62.0		Muni	69.0		Muni	80.0
Ingleside, Excelsior,		BART	9.0		BART	19.0		BART	10.0
Twin Peaks, and Upper Market)									
Southeast	5.0	Auto	26.0	7.0	Auto	13.0	2.0	Auto	10.0
(Potrero Hill, Bayview,		Muni	52.0		Muni	38.0		Muni	80.0
Hunters Point,		BART	22.0		BART	50.0		BART	10.0
East and South of 101)									
Peninsula	18.0	Auto	44.0	8.0	Auto	50.0	3.0	Auto	25.0
(San Mateo and Santa		Muni	3.0		Muni	0.0		Muni	0.0
Clara Counties)		BART	19.0		BART	30.0		BART	25.0
		SamT	7.0		SamT	10.0		SamT	0.0
		SPRR	27.0		SPRR	10.0		SPRR	50.0
East Bay	30.0	Auto	33.0	20.0	Auto	13.0	6.0	Auto	38.0
(Alameda and Contra		BART	37.0		BART	79.0		BART	62.0
Costa Counties)		AC	30.0		AC	8.0		AC	0.0
North Bay***	12.0	Auto	58.0	8.0	Auto	70.0	2.0	Auto	70.0
(Marin and Sonoma		GGTB	35.0		GGTB	20.0		GGTB	30.0
Counties)		GGTF	7.0		GGTF	10.0		GGTF	0.0

* Percent of travel with origins or destinations in each geographic area.

** Percent of travel in each geographic area using listed mode of travel.

*** GGTB stands for Golden Gate Transit Bus; GGTF stands for Golden Gate Transit Ferry.

SOURCE: San Francisco Department of City Planning, TJKM, Environmental Science Associates.

TABLE D-4: PEDESTRIAN FLOW REGIMEN

FLOW REGIME	CHOICE	CONFLICTS	FLOW RATE (P/F/M)*	
			Average	percent of Capacity used
Open	Free Selection	None	0.5	0.0-3.0
Unimpeded	Some Selection	Minor	0.5-2	3.1-11.0
Impeded	Some Selection	High Indirect Interaction	2-6	11.1-33.0
Constrained	Some Restriction	Multiple	6-10	33.1-56.0
Crowded	Restricted	High Probability	10-14	56.1-78.0
Congested	All Reduced	Frequent	14-18	78.1-100.0
Jammed**	Shuffle Only	Unavoidable		above 100.0

* P/F/M = Pedestrians per foot of a effective sidewalk width per minute.

** For Jammed Flow, the (attempted) flow rate degrades to zero at complete break down.

SOURCE: Urban Space for Pedestrians, MIT Press, 1975, Cambridge, MA.

gives the capacity of an intersection in vehicles per hour per lane. (This method is explained in detail in an article entitled "Intersection Capacity Measurement Through Critical Movement Summations: A Planning Tool," by Henry B. McInerney and Stephen G. Peterson, January 1971, Traffic Engineering. This method is also explained in "Interim Materials on Highway Capacity", Transportation Research Circular No. 212, Transportation Research Board, January 1980). The maximum service volume for Level of Service E was assumed as intersection capacity. A service volume is the maximum number of vehicles that can pass an intersection during a specified time period in which operating conditions are maintained corresponding to the selected and specified Level of Service (see Table D-5). For each intersection analyzed, the existing peak-hour volume was computed and a volume-to-capacity (v/c) ratio was calculated by dividing the existing volume by the capacity at Level of Service E. Table D-6 shows the lane capacities used in this analysis.

EMPLOYMENT TREND APPROACH TO CUMULATIVE ANALYSIS

In this and other San Francisco EIRs, a land use approach has been used to estimate employment and the resultant transportation impacts of both the proposed project and cumulative development. An alternate approach is to forecast travel demand based upon regional projections of employment share (employment trend approach)./10/ Briefly, the fundamental differences between (and limitations of) the two approaches are:/11/

The land use approach (as it has been applied in this EIR) has used net new office space actually proposed or under construction (less space in buildings demolished to make way for new buildings) as the basis for travel generation. The land use approach assumes that literally all of the currently proposed development in the downtown area will be constructed and fully occupied within the time frame of the 222 Kearny St. project development and occupancy. No allowance has been made for less than 100% occupancy, for proposed developments that are never constructed, or for those that would not be occupied within the time frame of the project.

The employment trend approach generates a total increase in employment in downtown that has taken account of loss of employment as industries and offices move out of the City, replacement of one industry with another (industry shifts), as well as replacement of existing office space with new office space. The employment trend approach makes no implicit assumptions concerning occupancy rates or actual square footage of development constructed; rather, it generates total employment increases by assigning jobs by metropolitan sector (area), based upon extrapolation of past trends, and considering long-term industry shifts to, within, and away from each area.

Note that neither of the two approaches has attempted to project future changes in modal split.

To illustrate the differences in projections resulting from the two approaches, Table D-6, following, shows the total employment projections by the two methods (and the project's share thereof), the regional distribution of trips, and Muni's share of the new transit travel (and the project's share thereof).

As shown in the table, the employment trend approach predicts about 16% fewer employees in the downtown and about four percent more riders on the Muni than does the land use approach. The employment trend approach would thus approximate the transit demand impacts discussed on pp. 104-116 of the EIR. Similar conclusions can be drawn for the other transit agencies.

The two methods differ in several ways. The land-use approach, as it has been applied in San Francisco EIR's, analyzes impacts for the p.m. peak hour, whereas the employment trend approach analyzes the a.m. peak. Several reasons exist as to why one peak (or the other) may be the better one to analyze.

First, the p.m. peak may be more useful to analyze; actual observation shows that the p.m. peak has a greater overall effect on the local street network and transit system in the Downtown than does the a.m. peak, because more travel takes place during the p.m. peak. Also, transit service is more inclined to differ from scheduled times during the p.m. peak than during the a.m. peak, as operational delays have had an 8- to 10-hour period over which to accumulate. Finally, the on-ramps to the freeway/bridge system are greater bottlenecks (in the p.m. peak) than are the off-ramps (in the a.m. peak).

Conversely, the characteristics of the a.m. peak may be more useful in that they are much sharper than those of the p.m. peak (i.e., a greater percentage of the peak-period travel occurs during a single hour). Also, as a result of the bridge system into San Francisco, travel inbound into the City is much easier to document, as tolls are collected on the inbound direction on the Golden Gate and Bay Bridges. Finally, a greater proportion of the travel occurring during the a.m. peak is employment-related; the p.m. peak also includes shopping and pleasure trips that are not directly affected by increased office space.

TABLE D-5: VEHICULAR LEVELS OF SERVICE

Level of Service	Description	Volume/Capacity* v/c Ratio
A	Level of Service A describes a condition where the approach to an intersection appears quite open and turning movements are made easily. Little or no delay is experienced. No vehicles wait longer than one red traffic signal indication. The traffic operation can generally be described as excellent.	0.60
B	Level of Service B describes a condition where the approach to an intersection is occasionally fully utilized and some delays may be encountered. Many drivers begin to feel somewhat restricted within groups of vehicles. The traffic operation can be generally described as very good.	0.61- 0.70
C	Level of Service C describes a condition where the approach to an intersection is often fully utilized and back-ups may occur behind turning vehicles. Most drivers feel somewhat restricted, but not objectionably so. The driver occasionally may have to wait more than one red traffic signal indication. The traffic operation can generally be described as good.	0.71- 0.80
D	Level of Service D describes a condition of increasing restriction causing substantial delays and queues of vehicles on approaches to the intersection during short times within the peak period. However, there are enough signal cycles with lower demand such that queues are periodically cleared, thus preventing excessive back-ups. The traffic operation can generally be described as fair.	0.81- 0.90
E	Capacity occurs at level of service E. It represents the most vehicles that any particular intersection can accommodate. At capacity there may be long queues of vehicles waiting up-stream of the intersection and vehicles may be delayed up to several signal cycles. The traffic operation can generally be described as poor.	0.91- 1.00
F	Level of Service F represents a jammed condition. Back-ups from locations downstream or on the cross street may restrict or prevent movement of vehicles out of the approach under consideration. Hence, volumes of vehicles passing through the intersection vary from signal cycle to signal cycle. Because of the jammed condition, this volume would be less than capacity.	1.00

* Capacity is defined as Level of Service E.

SOURCE: San Francisco Department of Public Works, Traffic Division, Bureau of Engineering, 1965.

TABLE D-6: COMPARISONS OF LAND-USE AND EMPLOYMENT TREND APPROACHES

Approach	Downtown Employment Increase	Project Share/a/	Regional Trip Share				Muni Peak-hour Increase/b/	Project Share/c/
			S.F.	Pen.	E.B.	N.B.		
Land Use	66,800	1.3%	49%	16%	24%	11%	12,400	1.2%
Empl.Trend/d/ (maximum)	56,100	1.5%	50- 54%	19%	17- 21%	10%	12,900/e/	1.2%

NOTE: Comparisons between the entries for the two approaches must be made with the understanding that the land-use approach reflects increases in employment and transit demand based solely upon increases in downtown office space, while the employment trend approach reflects total increases therein based upon historical trends. The differences among the regional trip share figures reflect these and the other differences between the two approaches.

/a/ Employment generated by the proposed project, as a percent of the cumulative downtown employment increase.

/b/ The Muni peak-hour increase is a demand projection (based upon existing and long-term employment trends) that is not dependent upon available or expected transit capacity.

/c/ Muni peak-hour trips generated by the proposed project, as a percent of the cumulative downtown Muni peak-hour increase.

/d/ These figures, represent the worst-case analysis under the employment trend approach reviewed and accepted by MTC, ABAG and Muni. Note that the land-use approach entries assume that an additional net new 17.3 million gross square feet of office space will come on line by late 1990.

/e/ Based on 54% regional trip split to San Francisco (worst-case).

The land-use approach, as it has been used in this EIR, examines the p.m. peak because it has been observed to be the worst case for congestion on the City transportation system. This analysis does not reflect the spreading of the p.m. peak that is currently occurring, as all of the new trips have been assumed to take place in a single hour.

The land use approach calculations have assumed transit capacity to be fixed at existing levels. The OER memorandum/8/ points out, "It should be recognized that transportation is a more 'elastic' resource with many options for expansion including increasing existing capacity by using articulated vehicles, expanded car pool and van pool programs and increasing the peak commuter period through flex-time programs, among others."

If future office development does not occur along the lines of the past long-term trends, as assumed in the employment trend approach, then the projections made in Working Paper I would be revised. The average annual

growth during the period 1965-1980 was less than the growth per year proposed, approved, or under construction for the period 1980-1984. The employment trend approach assumes average growth through 1990 would be at the lower historic rate, reflecting activity fluctuations from the current rate including slowdowns due to changing business conditions.

Until a forecast exists to determine how the current decade's cycle of development may differ from the past, a judgment of the applicability of results from Working Paper I may not be made. Consequently, this EIR has retained the land-use approach and presented this comparison of the employment trend approach. Both methods should be looked upon as describing potential scenarios of future conditions.

NOTES

/1/ Land uses from Draft Second Supplement Yerba Buena Center Final Environmental Impact Report, San Francisco Department of City Planning May 28, 1982

/2/ Land uses from Rincon Point - South Beach Redevelopment Area, San Francisco, California, Final Environmental Impact Report/Environmental Impact Statement, San Francisco Department of City Planning certified November 5, 1980.

/3/ The regional distribution, office trip generation, trip purpose and peak hour percentage are from Attachment 1 of the Guidelines for Environmental Impact Review, Transportation Impacts Department of City Planning, October 1980 and the modal split assignment is from Attachment 2 supplemented by survey data collected by Environmental Science Associates, Inc.

/4/ Retail trip generation is from Trip Generation, Institute of Transportation Engineers (ITE), 1979. Rates have been adjusted from vehicle trip ends to person trip ends based upon an assumed vehicle occupancy of 1.4 persons per vehicle. The survey of retail travel was conducted by Environmental Science Associates at Embarcadero Center on Thursday, June 17, 1982 between 10:00 a.m. and 4:00 p.m.

/5/ The percentage of work and non-work trips is from the Guidelines (see note 1) and from Urban Travel Patterns for Hospitals, Universities, Office Buildings, and Capitols, Report No. 62, National Cooperative Highway Research Program.

/6/ Muni projections from Municipal Railway Street Rehabilitation and Replacement Plan, San Francisco Public Utilities Commission, May 1982; BART projections from Marty Birkenthal of BART on August 18, 1982; SamTrans projections from Gregory Kipp of SamTrans on August 18, 1982; A-C Transit proposals from Ted Reynolds of AC Transit on August 18, 1982; Golden Gate Transit proposals from Alan Zahradnik of Golden Gate Transit on August 19, 1982, Southern Pacific proposal from James Strong, Design Engineer with Southern Pacific, on August 26, 1982.

/7/ East Bay auto occupancy is from data collected at the Bay Bridge toll plaza by the Metropolitan Transportation Commission; North Bay auto occupancy is from data collected at the Golden Gate Bridge toll plaza by the Golden Gate Bridge, Highway and Transportation District; Southern Peninsula auto occupancy is an estimate from CalTrans.

/8/ The occupancy rate is from The Downtown Traffic and Parking Study, San Francisco Department of Public Works, 1970.

/9/ The parking characteristics data are from a federally-sponsored research document: Urban Travel Patterns for Hospitals, Universities, Office Buildings, and Capitols, Rept. No. 62, 1969, National Cooperative Highway Research Program (NCHRP)

/10/ Department of City Planning, Working Paper I, Projection of Long-range Transportation Demand, May, 1982, prepared in cooperation with the Metropolitan Transportation Commission (MTC), the Association of Bay Area Governments (ABAG), and the Municipal Railway (Muni). Employment trend data was compiled by ABAG from trends in County Business Pattern (U.S. Department of Commerce, Bureau of the Census, March 12, 1979), with 1979 as the base year for future projections and regional distributions. Modal split data are from the 1975 Travel Survey prepared by MTC.

/11/ The Department of City Planning, Office of Environmental Review (OER), has issued a memorandum, dated July 2, 1982, dealing with the subject of the differences in the land-use and employment trend approaches, and recommending that both approaches be used in future EIRs to give a more balanced assessment of future peak transportation demand. This memorandum is on file with and available from the Office of Environmental Review, 450 McAllister St., 5th Floor. The memorandum calls out some of the fundamental differences between the two approaches and also details the limitations of each approach.



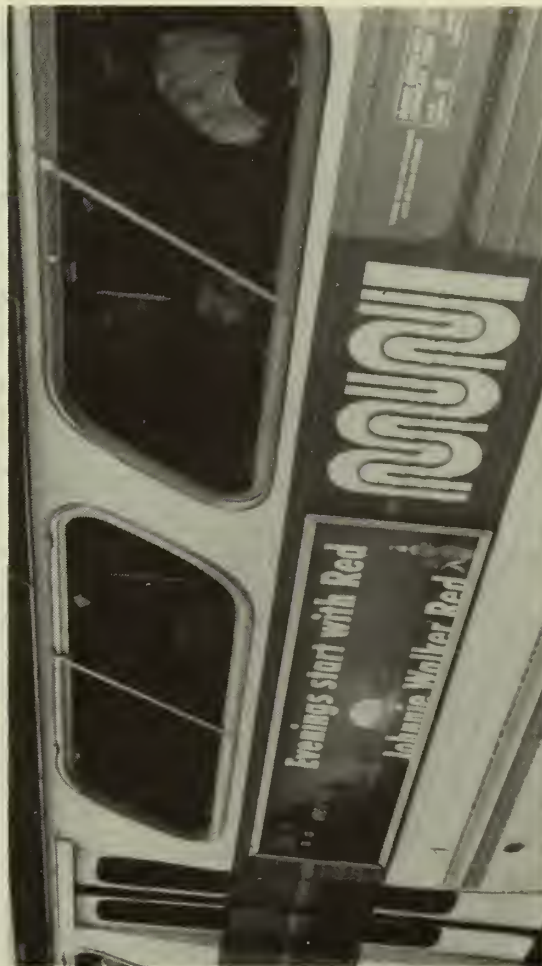
K Ingleside - Van Ness Station

Wednesday, September 9, 1981 - 8:00 A.M. - Inbound



N Judah - Van Ness Station

Wednesday, September 16, 1981 - 5:00 P.M. - Outbound



38 Geary - Van Ness Ave. and O'Farrell St.

Wednesday, October 21, 1981 - 9:00 A.M. - Inbound



38 Geary - Van Ness Ave. and Geary Blvd.

Wednesday, October 21, 1981 4:20 P.M. - Outbound

SOURCE: Environmental Science Associates, Inc.

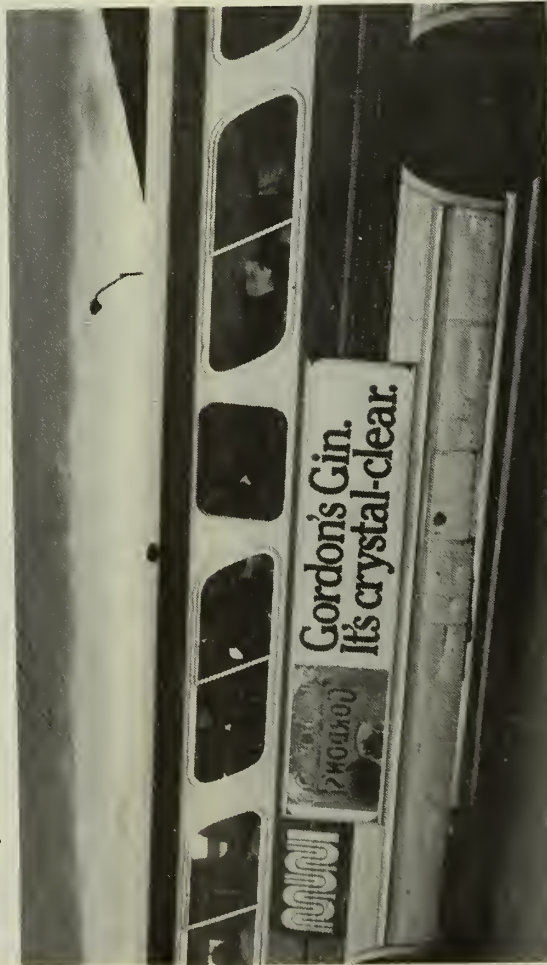
FIGURE D-7: Photographs of Peak
Muni Loading Conditions



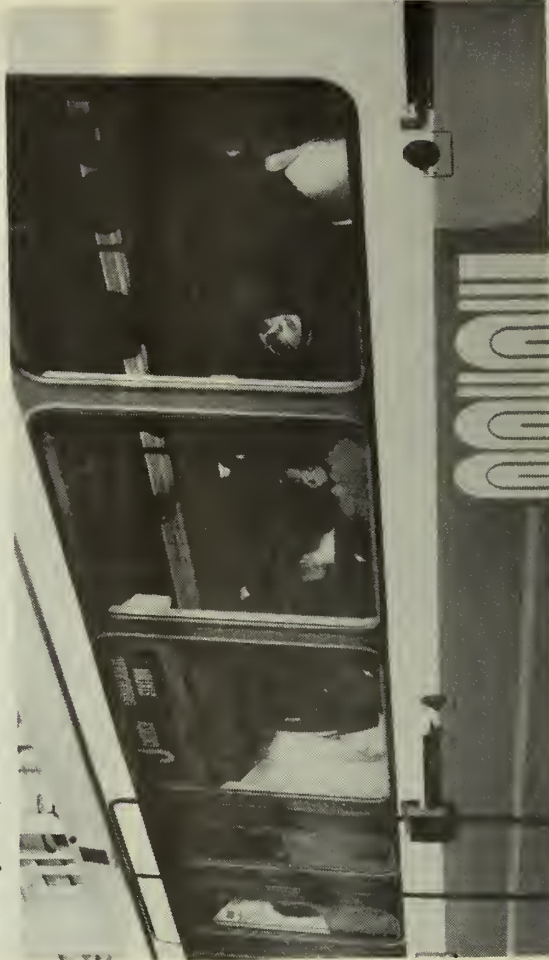
11 Hoffman - Mission St. and S. Van Ness Ave.
 Wednesday, October 21, 1981 - 8:10 A.M. - Inbound



11 Hoffman - Mission St. and S. Van Ness Ave.
 Tuesday, September 29, 1981 - 5:10 P.M. - Outbound



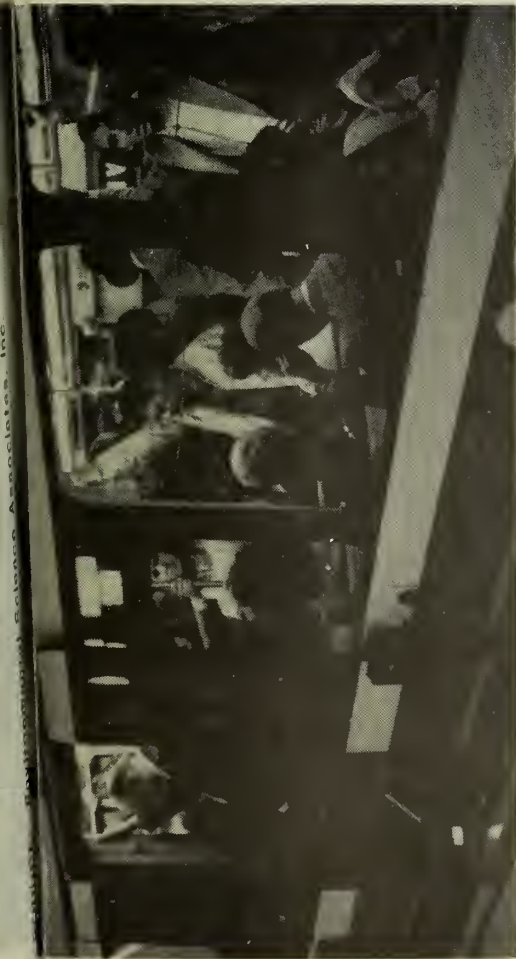
30X Marina Express - Bayshore Ave. and Arleta Ave.
 Wednesday, October 7, 1981 - 8:00 A.M. - Inbound



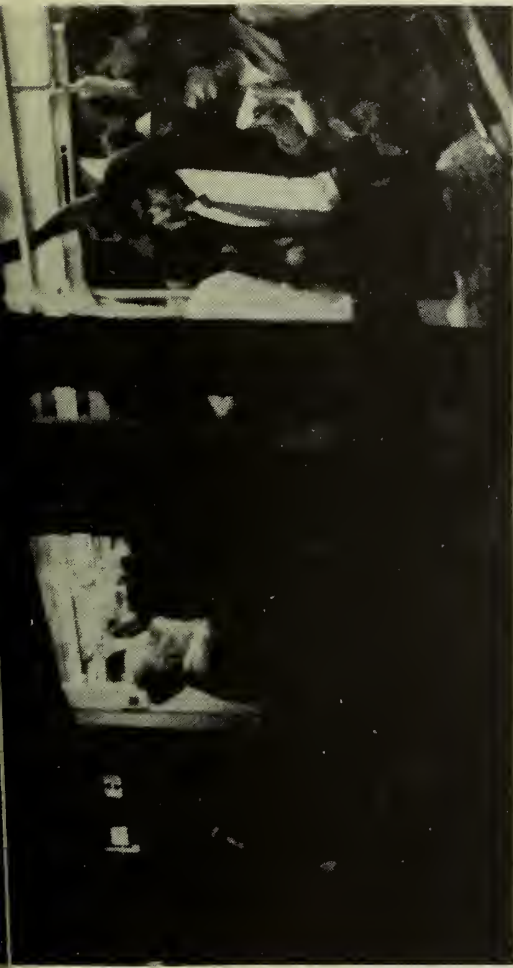
J Church - Church St. and Duboce Ave.
 Tuesday, September 29, 1981 - 9:00 A.M. - Outbound

SOURCE: Environmental Science Associates, Inc.

FIGURE D-7: Photographs of Peak
 Muni Loading Conditions
 (continued)



M Ocean View - Civic Center Station
Wednesday, September 9, 1981 - 8:20 A.M. - Inbound



L Taraval - Van Ness Station
Wednesday, September 16, 1981 - 4:50 P.M. - Outbound



14 Mission - Mission St. and S. Van Ness Ave.
Tuesday, September 29, 1981 - 5:45 P.M. - Outbound



N Judah - Irving St. and Ninth Ave.
Tuesday, September 29, 1981 - 8:20 A.M. - Inbound

SOURCE: Environmental Science Associates, Inc.

FIGURE D-7: Photographs of Peak
(continued) Muni Loading Conditions

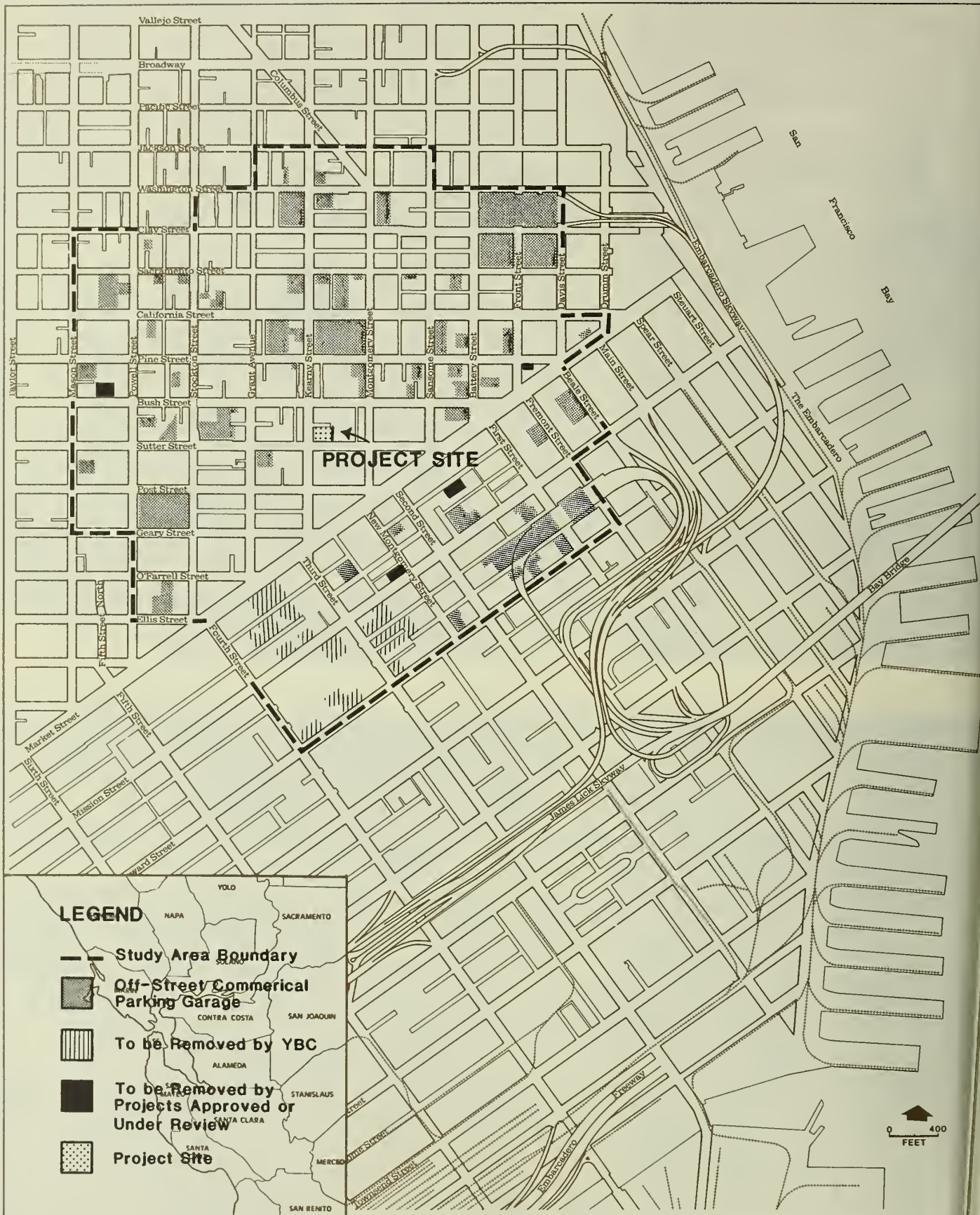


FIGURE D-8:
Parking Survey Study Area

SOURCE: Environmental Science Associates, Inc.

APPENDIX E: WIND STUDY METHODOLOGY

This summary of wind study methodology is based on the report prepared by Bruce R. White, Ph.D., Associate Professor of Mechanical Engineering at the University of California, Davis. The study is independent of the university. This report is available for review at the Office of Environmental Review, 450 McAllister St., San Francisco.

A 1 inch = 50 ft. scale model of the downtown San Francisco area surrounding the proposed building for several blocks in all directions was provided by Environmental Science Associates. The model included three configurations (existing, project, and alternative project conditions). Proposed, approved and under construction buildings in the project area were included in the model: 333 Bush St., Russ Tower, San Francisco Federal Savings headquarters, 580 California St., 101 Montgomery St., Crocker Bank headquarters and 466 Bush St.

The model was tested in a wind tunnel that allows testing natural atmospheric boundary layer flows past surface objects such as buildings and other structures. The tunnel has an overall length of 22 meters (m) (72 ft.), a test section of 1.22 m (4 ft.) wide by 1.83 m (6 ft.) high, and has an adjustable false ceiling. The adjustable ceiling and turbulence generators allow speeds within the tunnel to vary from 1 to 4 meters per second (m/s) or 4.8 to 19.3 miles per hour (mph).

The wind study was divided into two parts: flow visualization and wind-speed measurements. The flow visualization observations were performed by injecting a continuous stream of smoke at various near-surface locations. The subsequent motion of the smoke was recorded, and prevailing wind directions were determined. Wind-speed measurements were made at 22 surface locations using a hot-wire anemometer, an instrument that directly relates rates of heat transfer by electronic signals. The hot-wire signals are proportional to the magnitude and steadiness of the wind. Both the mean wind speeds and corresponding turbulence intensities were measured. Thus, high wind speeds and gustiness (large variable changes in wind speeds over short changes in time) could be detected. Hot-wire measurements made close to the surface have an inherent uncertainty of $\pm 5\%$ of the true values. The ratio of near-surface speed to freestream wind speed was calculated from the hot-wire measurements. These ratios are discussed in the text.

Experiments were performed for three prevailing wind directions (westerly, northwesterly, and southwesterly) for the existing, project, and alternative conditions. These wind conditions are the most common in San Francisco, and are therefore the most representative for evaluation purposes. All hot-wire measurements were taken at the same series of surface points around the building site for the three wind directions and the site conditions.

TABLE E-1: WIND SPEED RATIOS FOR LOCATIONS NEAR THE PROJECT SITE*

Location**	West		Southwest		Northwest	
	Existing	Project	Existing	Project	Existing	Project
1	0.09	0.14	<u>0.23</u>	<u>0.18</u>	<u>0.10</u>	<u>0.20</u>
2	0.09	0.14	<u>0.26</u>	<u>0.21</u>	<u>0.10</u>	<u>0.21</u>
3	<u>0.17</u>	<u>0.21</u>	<u>0.25</u>	<u>0.32</u>	0.12	0.12
4	0.21	0.23	<u>0.29</u>	<u>0.35</u>	0.13	0.16
5	<u>0.28</u>	<u>0.34</u>	0.14	0.18	0.16	0.17
6	0.11	0.11	<u>0.14</u>	<u>0.21</u>	0.10	0.16
7	0.17	0.13	<u>0.13</u>	<u>0.22</u>	0.05	0.16
8	0.08	0.13	0.17	0.16	<u>0.10</u>	<u>0.20</u>
9	<u>0.13</u>	<u>0.29</u>	<u>0.29</u>	<u>0.19</u>	<u>0.15</u>	<u>0.11</u>
10	0.17	0.09	0.22	0.27	<u>0.27</u>	<u>0.43</u>

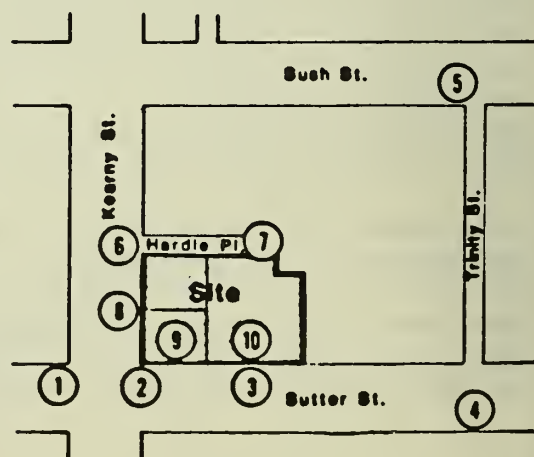
* Underlined ratios and corresponding project wind effects are discussed in the text. See table below for explanation of relative intensity of surface winds.

** See map below for location identification.

RELATIVE INTENSITY OF SURFACE WINDS

Ratios of Wind Speed at Pedestrian Level to Freestream Wind Speed	Relative Intensity of Surface Winds
0.00 - 0.19	Low
0.20 - 0.29	Moderately Low
0.30 - 0.49	Moderate
0.50 - 0.69	Moderately High
0.70 - 1.00	High
Greater than 1.00	Very High

LOCATION OF WIND SPEED MEASUREMENTS



SOURCE: Bruce R. White, Ph.D.

APPENDIX F: SAN FRANCISCO AIR CONTAMINANT SUMMARY 1979-1981

STATIONS: 939 Ellis Street and 900 23rd Street, San Francisco/a/

<u>POLLUTANT:</u>	<u>STANDARD</u>	<u>1979</u>	<u>1980</u>	<u>1981</u>
OZONE (Oxidant)				
1-hour concentration (ppm /b/)				
Highest hourly average	0.12 /c/	0.08	0.09	0.07
Number of exceedances of standard		0	0	0
Expected Annual Excess/d/		0.0	0.0	0.0
CARBON MONOXIDE/e/				
1-hour concentration (ppm)				
Highest hourly average	35 /c/	20	10	8
Number of exceedances of standard		0	0	0
8-hour concentration (ppm)				
Highest 8-hour average	9 /c/.4	13.8	7.5	5.3
Number of exceedances of standard		2	0	0
NITROGEN DIOXIDE				
1-hour concentration (ppm)				
Highest hourly average	0.25 /e/	0.16	0.17	0.11
Number of exceedances of standard		0	0	0
SULFUR DIOXIDE				
24-hour concentration (ppm)				
Highest 24-hour average	0.05 /e/	0.034	0.018	0.04
Number of exceedances of standard/f,g/		0	0	0
TOTAL SUSPENDED PARTICULATE				
24-hour concentration (ug/cubic meter)				
Highest 24-hour average	100 /f/	117	173	103
Number of exceedances of standard/h/		1	6	1
Annual concentration (ug/cubic meter)				
Annual Geometric Mean	60 /f/	42	52	56
Annual exceedance of standard		No	No	No

/a/ In January, 1980, the monitoring functions of the Ellis St. Station were transferred to the 23rd St. Station. S.F. data after January 1, 1980, are from 23rd St. The Ellis St. station continues to monitor for carbon monoxide. However, data collected at the Ellis station do not meet EPA or ARB criteria for representativeness.

/b/ ppm: parts per million.

/c/ National standard, not to be exceeded more than once per year (except for annual standards which are not to be exceeded). One-hour standard is 20 ppm as of January 15, 1983.

/d/ Expected Annual Excess is a 3-yr average of annual excesses.

/e/ California standard, not to be equaled or exceeded.

/f/ Exceeding the sulfur dioxide standard is a violation only if a concurrent excess of the state ozone or suspended particulate standards occurs at the same station. Otherwise, the national standard of 0.14 ppm applies.

/h/ Number of observed excess days (measurements taken once every 6 days).

/i/ ug: micrograms.

SOURCE: BAAQMD, 1979 - 1981, Contaminant and Weather Summaries.

APPENDIX G: PROJECTS INCLUDED IN COMPARATIVE ANALYSIS OF ENERGY CONSUMPTION

<u>EE Number</u>	<u>Project</u>	<u>Gross Square Feet</u>
80.26	101 Montgomery St.	248,480
79.178	456 Montgomery St.	233,050
79.236	101 Mission St.	223,600
80.349	Spear-Main Building	308,000
80.339	S.F. Federal Savings and Loan	199,100
81.61	135 Main St.	264,600
81.104E	Washington Montgomery Building	329,800
79.57	Daon Building	289,000
80.296	Bank of Canton	168,430

SOURCE: Environmental Science Associates, Inc.

